🖥 **Tech Focus**
Desktop PCs

🖨 **Business Tech**
Is Fax Dead?

❄ **Maintenance Basics**
Cooling Your System

A New Era In Computing

Ultra-Responsive. Ultra-Sleek. Ultrabook.™

These Ultrabook™ systems are powerhouses that wake up in a flash and run for hours.

INSPIRED BY (intel®)

TECH SUPPORT | Troubleshooting Reference Guide
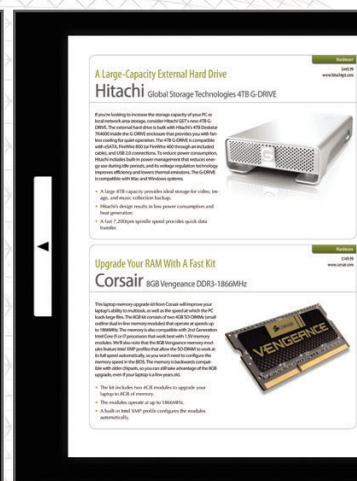
Your Guide To New Technology

When you buy technology for your home or small office, a little research can go a long way.

That's why *Smart Computing* brings you news, reviews, and instructions for setting up the latest products each month. We keep you up to speed on computers, components, software, and the ever-growing world of online services. Our plain-English articles define unfamiliar, technology-related words so you can shop with confidence. What's more, *Smart Computing* shows you how to set up and use many of the products available today.

Tutorial   Overviews   Buyer's Guides

computers | components | software | online services | new products

On The Cover

Ultrabook™ Systems Have Arrived

Intel Inspires A New Era In Computing

A new era in computing, inspired by Intel. Ultra-Responsive. Ultra-Sleek. Ultrabook™. These Ultrabook™ systems are powerhouses that wake up in a flash and run for hours.

Buyer's Guides

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Technology News

SOCIAL MEDIA IMPERATIVE FOR BUSINESSES

Analysts at Gartner have good news for organizations that have begun to pursue social media as a way to engage with customers. They say that by 2014, engaging customers through social media will be as vital and as expected as email and phone communications are today. Organizations that have gotten a head start will be well-positioned once the social media revolution kicks off; conversely, those organizations that have yet to develop a strategy for communicating with customers about their products and services via social media may suffer if they continue to ignore the writing on the wall.

SMARTPHONE MARKET UPDATE

IDC's latest Worldwide Quarterly Mobile Phone Tracker report found that 85% of all smartphones sold in Q2 2012 were either Google Android-based devices or Apple iOS-based iPhones. For the quarter, Google's partners shipped 104.8 million smartphones and Apple shipped 26 million, garnering each company 68.1% and 16.9% market shares, respectively. BlackBerry and Symbian shipments declined to the tune of 40.9% and 62.9% year-over-year, respectively. The platform with the most year-over-year growth was Microsoft's Windows Phone 7/Windows Mobile, which grew its market share by 115.3%. Despite that growth, Microsoft's platform was in fifth place with 3.5% of the smartphone market.

*Android and iOS-based smartphones dominate the market.*

DRIVERS NOT SOLD ON IN-VEHICLE TECHNOLOGY

One of Harris Interactive's latest polls reports that car owners are becoming increasingly skeptical of the safety of in-vehicle technologies, such as navigation systems, mobile Internet connectivity, emergency response systems, and driving-habit monitoring devices. According to the poll, 76% consider using in-car connectivity technologies distracting and potentially hazardous. This is despite the fact that 58% of car owners find that in-car connectivity makes driving more enjoyable and that 57% feel safer while on the road with the tech infusion, possibly because technology makes communicating with family and emergency services personnel much easier these days.
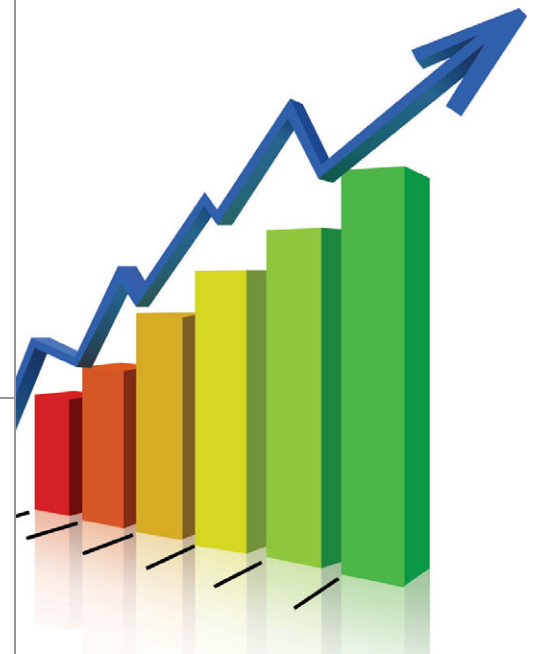

● Many drivers are becoming increasingly wary of in-car technology.
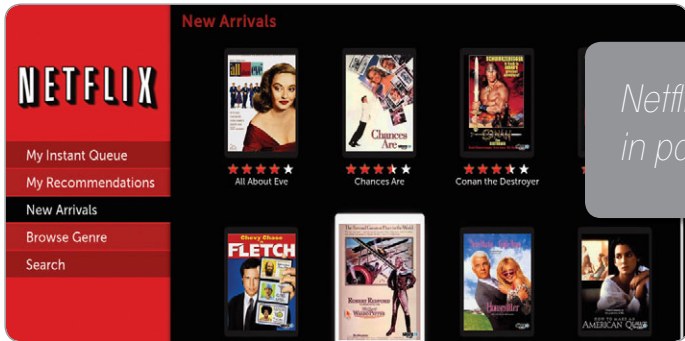
Netflix may be contributing to the decline in pay-TV subscriber additions.

PAY-TV PROVIDERS LOSE SUBSCRIBERS

In the most recent IHS Screen Digest release, the analyst firm found that pay-TV operators reversed recent gains and actually lost subscribers in Q2 2012. Net U.S. subscriber additions declined by 348,000, which is the largest subscriber loss in the industry's history. This follows three consecutive quarters of positive net subscriber additions. There are currently 100.9 million pay-TV service subscribers. Analysts at IHS blame seasonality, the poor economy, and stiff competition from online video providers, such as Netflix.

● Mobile phone cases are among the most popular accessories people buy for their phones.

MORE MOBILE PHONE ACCESSORIES

The most recent Mobile Phone Accessories Attach Rate Study, from The NPD Group, found that consumers are spending more on their mobile phone accessories. In the first half of 2012, revenue from mobile phone cases, headsets, and other add-ons in the U.S. grew 32% compared to the first half of 2011. The accessory category that saw the biggest growth was mobile phone cases, which increased 69% compared to the previous year. Stereo headphones with mics were also popular, increasing 67%. The NPD Group also reports that average prices for both accessory types increased by 25%.

ONLINE SALES SOARING

According to new data from comScore, U.S. retail e-commerce sales estimates have grown for the eleventh quarter in a row. For Q2 2012, comScore estimates online retail spending reached $43.2 billion, up 15% compared to Q1. The report also lists the best-selling online product categories, which start with digital content and subscriptions and consumer electronics. Other top-performing categories include flowers, greetings and gifts, computer hardware, and apparel and accessories. A large portion of online sales (42%) included free shipping, which is down compared to Q4 2011 when 52% of e-commerce transactions included free shipping.
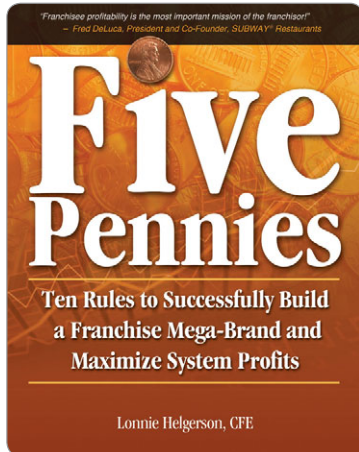
Business News

FIVE PENNIES

Looking to turn your small business into a franchise? *Five Pennies,* by Lonnie Helgerson, examines the reality of growing a national brand beyond the startup phase, rather than just providing a generic how-to-franchise-your-company tutorial. The book features over 120 tools to increase and manage your brand, and Helgerson uses examples from 20 popular brands as models. *Five Pennies* helps you learn about creating sustainable profitability, recruiting franchise buyers, structuring marketing, and using technology. Helgerson also gives you tips about things you'll want to look out for, with 10 "franchise mega-wrecks" providing examples of what not to do when turning your business into a franchise.

SERENDIPITY LABS

With a Serendipity Labs membership (www.serendipitylabs.com), you'll be able to join in a premium members-only workplace network that's designed with state-of-the-art office resources, including a lab manager, resources coordinator, flexible spaces, and technical security. Serendipity Labs indicates that it will open its Rye, NY location sometime in September. Serendipity Labs provides you with professional communication tools, including hosted IP telephones, HD video conferencing, and smart boards—all with secure access. Online management gives you a simple way to book workspaces, organize events and invites, and connect with other members. A future location is planned near Grand Central Terminal in midtown Manhattan.

● SERENDIPITY LABS

"We believe in creating environments that not only facilitate productivity, but also inspire success."

– John Arenas, Serendipity Labs CEO

EMAIL IS STILL RELEVANT

There's a lot of talk these days about marketing through search optimization and social networking, but a recent infographic from Monetate found that email is still the most popular way to reach customers. For example, Monetate indicates that email provided average add-to-cart rates (per session) of 10.91% from April 2012 to June 2012, while search and social media only delivered rates of 7.09% and 2.28%, respectively. The infographic also indicated that retail email volume increased by 18% from January through May 2011 to January through May 2012. Email also boasted the highest conversation rate per session, 4.16%, while search (2.64%) and social media (0.48%) lagged significantly behind.
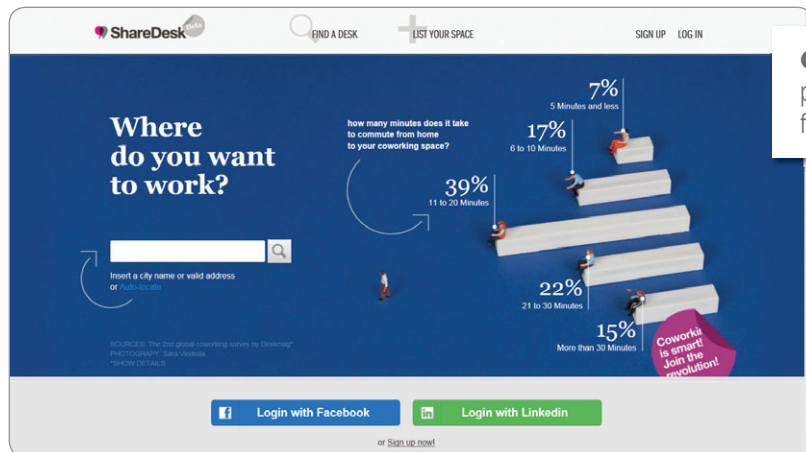
● Sharedesk is an online market-place that allows mobile workers to find and book shared workspaces.

RENTED DESK SPACE

ShareDesk (www.sharedesk.net) is a service that works with companies to help rent idle office space and turn it into co-working spaces. As of this writing, ShareDesk offers more than 700 properties at worldwide locations. Just visit the ShareDesk website, search by city or ZIP code, and browse through the available listings. Each location will list office hours, amenities, and services, so you'll be able to select one that best suits your needs. You'll also be able to see pictures of the office space. When booking a workspace, you pay with your credit card through ShareDesk's website, and the host will provide you with check-in info.

ON-DEMAND OFFICE SEARCH

Office service and technology provider Officescape (www.officescape.com) has re-leased a search tool that allows mobile workers to reserve on-demand offices and meeting rooms from Officescape's more than 1,300 locations. The search tool is available at www.officescape.com, which can be accessed via both PC and mobile devices. The search tool is similar to a travel site: Simply provide the location you want to go and the length you'll be there. You'll be able to comb through the results by capacity, distance, price, and available amenities. Just press the Select button to reserve a space. You can even rent offices by the hour, day, or month.
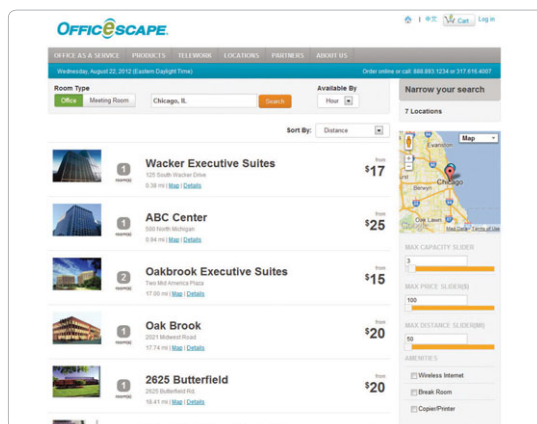
● SMALL BUSINESS EVENTS

Small business events give you a chance to learn critical management skills and network with professionals in related fields. Don't miss these upcoming opportunities. If you would like to see your event here, email editor@smartcomputing.com with the subject Small Business Event.

WOMEN'S BUSINESS CONFERENCE 2012
Louisville, Ky. | Oct. 4-5
http://nawbo.org

INFUSIONSOFT SMALL BUSINESS SUCCESS TOUR
Boston, Mass. | Oct. 5
www.infusionsoft.com

THE NEW YORK ENTERPRISE REPORT SMALL BUSINESS AWARDS
New York City, N.Y. | Oct. 10
www.nyreport.com/awards

WESTERN MASS BUSINESS EXPO 2012
Springfield, Mass. | Oct. 11
www.wmbexpo.com

PUBCON VEGAS 2012
Las Vegas, Nev. | Oct. 15-18
www.pubcon.com

SMALL BUSINESS BANKING CONFERENCE
Boca Raton, Fla. | November 7-9
www.americanbanker.com

SMALL BUSINESS EXPO
Los Angeles Calif. | Nov. 8
www.thesmallbusinessexpo.com

Small Business **Resources**

The Web has a trove of resources for SOHOs (small and home offices) and small businesses—if you know where to look. Find an association that can help you meet your goals; get information from the government about loans, grants, and taxes; and stay up-to-date with the best small business newsletters and blogs. If you have a pressing question, pose it on a forum to see what your peers have to say.
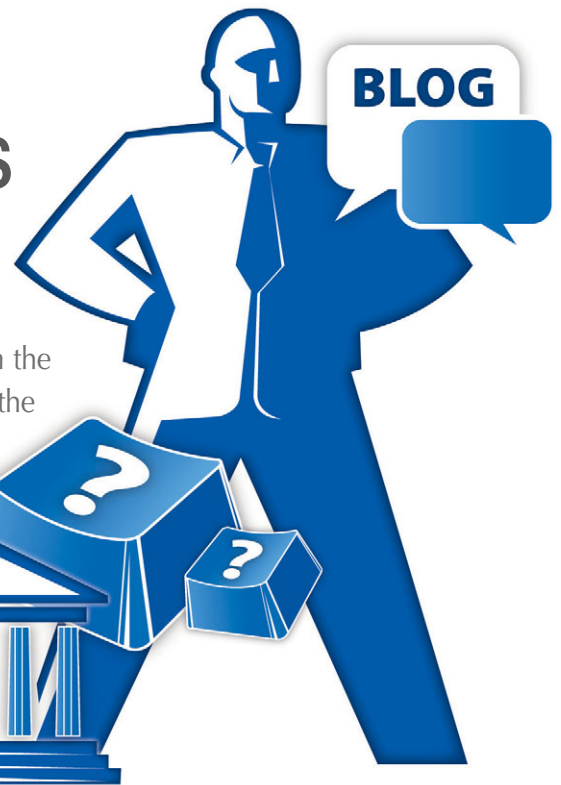
ASSOCIATIONS & SUPPORT

Better Business Bureau
www.bbb.org
(703) 276-0100
4200 Wilson Blvd.
STE 800
Arlington, VA
22203-1838

Main Street Alliance (MSA)
mainstreetalliance.org
info@mainstreetalliance
.org
(603) 831-1835
3518 S. Edmunds St.
Seattle, WA 98118

**National Federation of
Independent Businesses
(NFIB)**
www.nfib.com
(800) 634-2669
(615) 872-5800
53 Century Blvd.
STE 250
Nashville, TN 37214

**National Small Business
Association (NSBA)**
nsba.biz
(202) 293-8830
1156 15th St., STE 1100
Washington, DC 20005

SCORE
www.score.org
(800) 634-0245
(703) 487-3612
1175 Herndon Pkwy
STE 900
Herndon, VA 20170

**Small Business
Development Centers
Network (SBDCNET)**
www.sbdcnet.org
(800) 689-1912
501 W. Durango Blvd.
San Antonio, TX 78207

BLOGS

Signal vs. Noise
37signals.com/svn/posts

**Small Business Search
Marketing**
www.smallbusinesssem
.com

Small Biz Bee
smallbizbee.com

Small Business Trends
smallbiztrends.com

The Small Business Blog
www.sme-blog.com

**The Entrepreneurial
Mind**
www.drjeffcornwall.com

FORUMS

**Small Business
Administration
Community**
www.sba.gov
/community

**The Small Business
Community Forums**
www.smallbusiness
forums.org

**Small Business
Ideas Forum**
www.smallbusinessbrief
.com/forum

The Young Entrepreneur
www.youngentrepreneur
.com/forum

GOVERNMENT

Grants.gov

**House Committee On
Small Business**
smallbusiness.house.gov

**Small Business and
Self-Employed Tax Center**
www.irs.gov/businesses
/small

**Small Business
Administration (SBA)**
sba.gov

U.S. Copyright Office
copyright.gov

U.S. Department of Labor
dol.gov

**U.S. Senate Committee
on Small Business &
Entrepreneurship**
sbc.senate.gov

Small Business
Development Centers

Assistance For Entrepreneurs

Haven't the foggiest idea how to harness your entrepreneurial spirit, pull yourself anywhere using bootstraps, or think in or out of a box? Starting and running your own business is tough, but fortunately for prospective and current small business owners, SBDCs (Small Business Development Centers; asbdc-us.org) dispense with the clichés and offer training, counseling, and other assistance to help you craft your vision into a real-world success.

Run A Small Business

Pooling resources from federal, state, and local governments, as well as the private sector and the educational community, The Association of Small Business Development Centers is truly a joint venture with a vested interest in fostering small business growth. For an overview of what the SBDC can offer you and your small business, visit bit.ly/dKYe2a. The SBA (Small Business Administration; www.sba.gov) is partnered with SBDCs.

Help On Your Turf

You may be surprised to learn that there's probably an SBDC branch nearby; there are locations in all 50 states, in the District of Columbia, Puerto Rico, and even in the U.S. territories. There are 63 nationwide Lead Small Business Development Centers coordinating program services for every sub-center and satellite location in each state. Centers are made up of directors, full-time staff members, and various part-time staff and volunteers.

The best way to contact your nearest SBDC is to visit the Association of

Small Business Development Centers' Web site (asbdc-us.org), input your ZIP code into the Find Your Nearest Small Business Development Center text box, and then click Go. The results page will highlight Lead Centers but rank centers in order of those closest to your location. Often, SBDCs partner with universities and colleges, and tend to be found on campuses across the country. On the search results page, you'll also find a link to the local office's Web page,

Frequent Question

If you're like many other people starting a small business, funding is at the top of your mind. A common question that entrepreneurs have for SBDCs is: "Am I eligible for grant money?"

The answer depends on the nature of your business. Grants. gov (www.grants.gov) will give you a clear picture of your options before your visit to a Small Business Development Center.

email address, phone number, a fax number if available, and address.

The Closest Thing To A Free Lunch

The services offered may vary by location, but all SBDCs offer many services free of charge. Some typical services you canexpect from your nearest SBDC include help with financial, marketing, production, or-

ganization, engineering, and technical problems and access to feasibility studies that can flesh out a fledgling business plan. Some SBDCs also offer affordable training seminars to help with various aspects of running a business. You can also rest assured that your business with the SBDC will remain confidential.

Women's Business Centers

The SBA offers WBCs (Women's Business Centers), which directly serve female entrepreneurs through nearly 100 educational centers nationwide. This organization strives to assist women in overcoming the hurdles they face in today's business environment by offering business management training and technical assistance to all women, with a special emphasis on economically or socially disadvantaged women. The services and training programs are also commonly offered in multiple languages to enable those who speak English as a second language or are still learning English. To find your nearest WBC, visit bit.ly/hs3st2.

Small Business, Big Payoff

Small business owners know that achieving success is about taking risks, innovating, and making tough decisions day in and day out. Thanks to the services offered at the SBA, SBDCs, and WBCs, you're not on your own. ●

Visibly Faster Computing

The Intel®-Powered Ultrabook™

Traditional laptop shopping often involved some type of problematic choice. Portability meant sacrificing power; responsiveness led to forfeiting affordability; and built-in security often meant models with no style.

Intel® designed the Ultrabook™ so that you'll no longer have to deal with those limitations. An Ultrabook™ delivers maximum performance with a minimum of compromise.

Performance Provided By Intel®

The key behind the Ultrabook™ is today's Intel Core™ processors. Smart Core processors allow an Ultrabook™ to wake up nearly instantaneously from Sleep mode—giving you the ability to resume applications in five to seven seconds. And like a waiter who remembers your favorite orders, the Ultrabook™ will learn your favorites (i.e., your most frequently-accessed programs and files) for exceptionally fast service. The result is a portable computer that's visibly faster than a traditional laptop—not just an incremental step up from your last PC.

Portability

How often have you regretted lugging your bulky, heavy laptop with you? All Ultrabook™ systems must be less than an inch thick, so they'll easily slide into the storage compartment of your notebook bag. A key factor of portability is battery life, and Ultrabook™ devices offer a battery that will power the system for at least five hours, with a standby battery life measured in days. We found that many Ultrabook™ systems provide as many as 7 to 8 hours of battery life, which is a big improvement over the average laptop.

Security

Intel® provides the Ultrabook™ with built-in security, ensuring that your personal information will stay personal. For instance, Identity Protection provides you with hardware-based security that lets you use your PC as a "key" by linking your physical PC to your online accounts. This way, if a hacker obtained your username or password, the site would block access to them, because it would see that the ID of the computer being used to access that information wasn't your Ultrabook™. Intel® Anti-Theft Technology also lets you lock down the system if it's lost or stolen.

The Ultrabook™ offers a powerful combination of smart hardware and intelligent design to ensure that you make no compromises with your PC investment. The only thing more amazing than the Ultrabook™ is what you'll be able to do with it. ●

Work Smarter, Play Harder

The Truly Fast Ultrabook™

Ultrabook™ devices offer many technological advantages over laptops, but what you probably care about the most are the tactile and experiential differences. We've broken them down for you in this handy chart.

Ultrabook™ vs. Laptop	**Ultrabook™** No-compromise performance and responsiveness in an ultra-sleek design.	**Laptop** Some features, moderate performance, and built-in graphics in a traditional design.
Always less than an inch thick	✓	
Wakes up in a flash	✓	
Battery life that lasts for 5 to 7 hours or more	✓	
Faster access to your favorite applications	✓	
Intel® HD Graphics for a seamless, stunning graphical experience	✓	On some models
Extra performance on demand[1]	On Intel® Core™ i5 and i7 processors	On Intel® Core™ i5 and i7 processors
Supports the programs you know and love	✓	✓

1 Requires a system with Intel® Turbo Boost Technology. Consult your PC manufacturer. Performance varies depending on hardware, software, and system configuration. For more information, visit http://www.intel.com/go/turbo.

More Ultrabook™ Systems Appearing Regularly

More and more Ultrabook™ systems are coming out every day. Check back often at Staples (www.staples.com/Ultrabooks) to see the current upgrades to the instantly inspiring Ultrabook™. You'll also be able to check out the latest assortment of Ultrabook™ systems, so it's a great place to start when shopping for an Ultrabook™.

Hardware Buyer's Guide

Our Favorite Hardware Products

In this section, the Smart Computing *team looks at what hardware is out there and makes sure you know about our favorites. Whether it's a computer or a printer, a solid state drive or an eReader, a display or a tablet—almost any type of hardware can show up on these pages. When it does, you know that our writers and editors have decided that this is a product you should know about.*

We track down the best in hardware so that you don't have to.

Expand Your View
DoubleSight DS-90U

Running multiple monitors can increase your productivity, but if desk space is at a premium, then consider Double-Sight's compact and portable DS-90U, a 9-inch Active Matrix TFT LCD monitor that connects to your PC or laptop.

- Power and video signal come over the included USB cable; no additional display cables or power adapter necessary

- Widescreen native resolution of 1,024 x 600

- Snap-on cover makes it easy to store

- Excellent image quality, thanks to a 300:1 contrast ratio, 200cd/m2 brightness, and 30ms response time

- Folding and adjustable monitor stand

- Mac and PC compatible; three-year warranty

More Memory, More Performance
Corsair Vengeance 16GB DDR3-1600

Corsair's Vengeance DDR3-1600 memory can significantly speed up your system or serve as the foundation for a new computer that'll blow your old one out of the water.

- Kit includes four 4GB matched modules (16GB total) compatible with dual-channel memory motherboards

- Hand-selected Vengeance DRAM for superior speed and reliability

- Runs at 9 CAS latency and 1.5V, making it energy efficient and compatible with both Intel and AMD platforms

- Supports Intel Extreme Memory Profile for fast response times

- Cerulean blue heatsink keeps modules cool and reliable

- Lifetime limited warranty
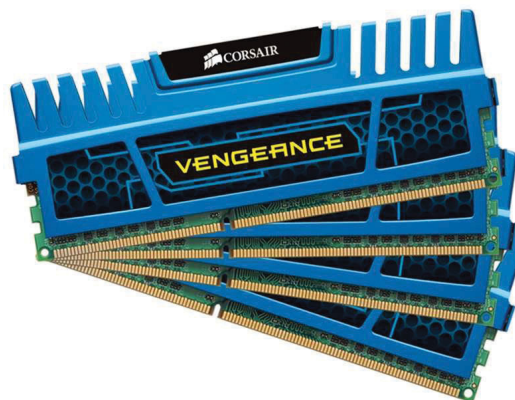
Faster Networking For Your Older PC
Intel PWLA8391GT Gigabit Ethernet Adapter

If your network runs at Gigabit speeds (1,000Mbps), then older desktops that only support 10/100 Ethernet adapters are a severe networking bottleneck. This adapter from Intel lets you quickly and easily add Gigabit Ethernet to any PC with a spare PCI slot.

- Low-profile form factor ensures an easy fit in almost any case
- Supports 10/100/1000 Ethernet speeds
- Supports advanced network-based functionality, including Wake On LAN and remote booting
- Corrects for cable problems, including crossover cables and cables with the wrong pin-out and polarity
- Capable of testing and reporting network issues, including interrupts, error rates, and cable length problems

(intel)
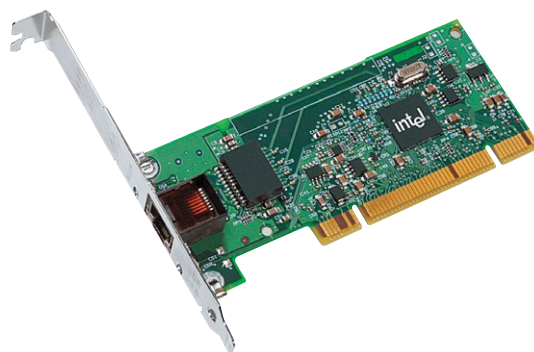
An Inkjet Workhorse
Epson WorkForce Pro WP-4530 All-In-One Printer

The WorkForce Pro WP-4530 from Epson is the world's fastest auto two-sided printer. This unit supports ISO (International Organization for Standardization) recognized print speeds of 16ppm black and 11ppm color. It's also one of the more efficient models you'll find, with a cost-per-page as low as half of what you'd pay using a color laser printer.

- Save on Ink - Up to 50% vs. Color Laser
- World's Fastest Auto 2-sided Printing
- Copy/scan/fax 2-sided documents
- 330-sheet paper capacity, 30-sheet automatic document feeder
- Wireless & Ethernet Connectivity
- Annual duty cycle of 20,000 pages
- Print wirelessly from tablets and smartphones

EPSON®
EXCEED YOUR VISION

www.ocz.com

A Refined SSD
OCZ Vertex 4 256GB

Installing a solid state drive is one of the best ways to speed up everything you do on your PC or notebook. The OCZ Vertex 4 is the latest in the Vertex line of high-performance SSDs from one of the best-known SSD manufacturers.

- 256GB drive offers plenty of capacity for the operating system, hundreds of applications, and assorted media files
- SATA III interface supports transfer speeds up to 6Gbps
- Up to 560MBps max sequential read and 510MBps max sequential write speeds
- Uses Indilinx-infused Everest 2 controller for excellent performance
- Fits any notebook to replace current 2.5-inch drive
- Five-year warranty, plus OCZ customer support

www.samsung.com

A Powerful Tablet In A Small Package
Samsung Galaxy Tab 2 7.0

For a tablet you can take anywhere, check out Samsung's Galaxy Tab 2 7.0. This seven-inch tablet is a perfect fit for your palm, and it's got a lot of power under the hood, too.

- Smart Remote and built-in IR Blaster let you use your tab as a remote for your TV
- Comes with Android 4.0, also known as Ice Cream Sandwich
- Powerful dual-core 1GHz processor for fast gaming and snappy performance
- 8GB of internal memory and a MicroSD card slot that supports up to 32GB of additional memory
- 7.6-inch screen supports a 1,024 x 600 screen resolution
- Supports wireless 802.11 b/g/n and Wi-Fi Direct, which lets you connect to other devices without an access point

Small On Size, Big On Image Quality
Canon PowerShot S100

If you think a point-and-shoot camera can't touch a DSLR when it comes to image quality, think again. The Canon PowerShot S100 features the DIGIC 5 Image Processor for superior images, even in low light.

- Fast f/2.0 lens lets you take impressive shots regardless of lighting conditions
- 12.1 megapixel image sensor for high-resolution photos
- 5X optical zoom and 4X digital zoom
- Supports 1080p video recording; output to HDTV
- Intelligent IS (image stabilization) for clear shots
- Integrated GPS tags every photo with your location

Canon

Labels Done Quickly & Inexpensively
Brother QL-720W

If you print a lot of labels for your business, nothing beats Brother's QL-720W, a dedicated label printer that supports Ethernet and wireless 802.11b/g/n networking.

- Prints up to 93 professional-looking labels per minute
- Creates up to 300dpi x 600dpi labels for packages, envelopes, file folders, discs, banners, merchandise, and more
- Print postage for shipments and envelopes at your office
- Prints onto easy-peel labels and continuous-length paper and film tapes for banners and signs up to three feet long
- No ink and toner required
- Includes P-touch Editor label design software; print from Microsoft Office applications

brother.

The Printer Reinvented

The Ultimate Combination Of Business Features

Thanks to its innovative Landscape Print Technology, Brother's latest Business Smart™ series of color inkjet all-in-ones is like nothing you've ever seen.

The Business Smart™ MFC-J4510DW differs from other currently available color inkjet all-in-ones in that it stores and feeds paper in a landscape orientation, rather than portrait. In practice, Brother's novel approach makes a big difference in all the right ways.

Speed Is King

One of the most obvious advantages of a printer that prints in a landscape orientation is speed. This printer produces a fastest-in-class[1] 20 ppm (page per minute) black and 18ppm color[2], based on the ISO (International Organization for Standardization) parameters.

A Pint-Sized Printer

The Landscape Print Technology of the MFC-J4510DW also enabled Brother's engineers to shrink the size of the printer considerably, up to a 35% smaller footprint versus competing machines[1]. And the printer can still print up to 11 x 17-inch sheets. Two-sided printing is also supported.

Print More For Less

Like many of Brother's printers, the MFC-J4510DW accepts super high-yield ink cartridges, so you can rely on it to cost-efficiently churn out page after page.

Excellent Extras

The Business Smart™ printers also feature a handful of extras that make

The MFC-J4510DW will be available at Staples on 9/25.

them handy for use in the home or office. The MFC-J4510DW lets you run web-based services right from the TouchScreen, including FACE-BOOK™, PICASA™ Web Albums, FLICKR®, EVERNOTE®, GOOGLE Docs™, and DROPBOX. The printer also supports wired Ethernet and 802.11b/g/n Wi-Fi connectivity. Like the rest of Brother's printers, the new Business Smart family printers come with a 2-year limited warranty and toll-free technical support for the life of the unit. ●

Intuitive TouchScreen

The large 3.7-inch color Touch-Screen Display and TouchPanel let users intuitively navigate the printer's basic and advanced functions with ease. It supports common TouchScreen gestures, including swiping, tapping, and dragging, so finding the function you need is easy and fun.

---

[1] Based on competing in-class inkjet models with an estimated street price under $200. Competitive data gathered from manufacturer websites and third party industry sources (as of July 2012).
[2] PPM is based on printing in FAST mode and excludes printing of first page and will depend on a variety of factors. ISO print speed based on ISO/IEC 24734. See www.brother-usa.com/printspeed for details.

Accessories Buyer's Guide

Our Favorite Accessories

OK, so you've got that awesome new computer, printer, laptop, or tablet, but what about all of the goodies that go with it? Your tablet needs a protective case—which might as well look great while it protects your investment. And you'll want a bag or backpack to help you carry that laptop to school or work, right? And what about a mount for your monitor, a case for your camera, or perhaps some paper for your printer?

In this section, the Smart Computing *team lets you know about our favorite accessories.*

When an accessory shows up here, you know that our writers and editors have decided that this is a product you should know about.

Create. Produce. Perform.
ALESIS iO Dock Docking Station For iPad & iPad 2

Professional and budding artists take note: The iO Dock from ALESIS lets anyone with an iPad create, produce, and perform music. It works with virtually any pro audio gear or instruments and offers all the connectivity you need with your iPad.

- Can be used with microphones and instruments, including guitars, studio monitors, PA speakers, headphones, and MIDI controllers
- Lets you connect your pro gear to virtually any app
- Composite video output, MIDI output, and MIDI input let you connect the iO Dock to televisions and projectors
- Microphone input, headphone output
- Includes a power supply and quick-start guide

ALESIS

Professional-Grade Protection
SurgeX DS-PPA Power Pro Advanced

You can benefit from the same power conditioning that professionals have relied on for years. With the SurgeX Power Pro Advanced, you can safeguard your business from power problems that can lead to downtime and equipment damage or failure.

- Industrial-strength power conditioning technology improves equipment reliability and provides networked protection
- Works with all digital equipment, including servers, PCs, copiers, and telephone systems
- Records the history of power issues and lets you customize power protection settings
- LCD event monitor summarizes power incidents
- Diagnostics software helps technicians analyze live power disturbances and download power disturbance reports

SURGEX

Mount Your LCD With Style
Peerless SmartMount Pivot Wall Arm

LCD mounts are becoming a fact of life in business and home settings. But you don't have to settle for a basic, stationary mount. The Peerless SmartMount Pivot Wall Arm can easily tilt up or down and rotate side to side. Plus, it's finished with anodized aluminum to complement any office or room.

- Supports 22- to 40-inch LCD screens
- Smooth, continuous tilt and roll features ensure you get just the right angle
- Arm can fold flat or extend up to 10 inches
- Preassembled for easy installation
- Comes with everything you need to install in concrete or to a single wood stud

peerless-AV

Advanced PowerPoint Presentation Control
SMK Link RemotePoint Global Presenter

Your next PowerPoint presentation can be more effective, with better delivery and more confidence, thanks to the RemotePoint Global Presenter from SMK Link. And with a remote range of up to 100 feet, you can easily interact with your audience.

- Dedicated buttons for advancing and reviewing slides
- Integrated laser pointer with polished metal top
- Mouse joystick with patented ClickTrigger button
- 360-degree mouse control
- 2.4GHz radio frequency wireless technology
- Easy installation—just plug in the USB receiver and install the batteries

SMK Link

Flexible · Secure · Ergonomic
DoubleSight Displays Flex Monitor Arms

DoubleSight Display's Flex Monitor mounting solutions are the perfect mounting solution for LCD monitors of all sizes, all-in-one computers, and LCD televisions.

The Flex Series offers a variety of arm options, providing height, tilt, pivot, and swivel adjustments, and allowing you to customize your view. Once fixed to the desktop or wall, Flex Arms provide a secure and ergonomic mount.

- Articulating Arm and Swing models for any size monitor
- Mount multiple monitors on a single pole
- Fully adjustable, ergonomic fit for any user
- Eliminate desktop clutter with built-in cable management
- Secures monitor in place for theft deterrence
- All Flex Monitor arms and stands ship completely assembled

DoubleSight
DISPLAYS

Carry Your Tablet In Safety & Style
Solo Classic UNIVERSAL FIT Tablet/eReader Booklet

Solo's UNIVERSAL FIT technology means that this tablet/eReader booklet can protect almost any tablet or eReader. With the UNIVERSAL FIT tablet/eReader case, you know that your valuable device is safe, secure, and conveniently handy.

- Flexible: use one case for countless brands and models of tablets and eReaders, including iPad® (generations 1, 2, and 3)
- Tensioned clips securely hold most brands of 5.5 to 8.5 or 8.5 to 11-inch tablets and eReaders
- Swivel-mount back allows you to view portrait or landscape
- Viewing angles adjust to minimize glare
- Magnetic strap ensures that the case stays closed

solo

Shreds In Half The Time!
Staples® High Speed Shredders

Tired of feeding your shredder? Staples High Speed Cross-Cut Shredders operate 2x faster than conventional, shredding the same amount in half the time, saving you time and money.

- Recognized as a Design & Innovation Honoree at 2012 Consumer Electronics Show
- Available in 12- (SKU 870264) and 16-sheet (SKU 356037) paper capacities
- Shreds paper, credit cards, CDs/DVDs, and staples
- Auto Reverse and V-Track Advanced Blade Design protect against paper jams
- Backed by a 1-year product warranty
- Tested in independent labs to ensure that they meet our high quality standards

Scan this tag to learn more

STAPLES that was easy:

Going Mobile
Staples® Phone Chargers

There's nothing worse than needing to make an important phone call or send a business-critical email and having your phone battery go dead. From car and wall chargers to dual device chargers to battery backups, Staples® brand gives you the power to quickly and easily recharge your mobile devices.

- High power output for rapid recharging of smartphones
- iPhone and micro USB compatible
- Plugs that fold flat and coiled cords keep you organized; designed for portability and easy use
- Dual charging on select car and wall models means you can simultaneously charge two devices
- All chargers are third-party tested and come with a limited one-year warranty

Scan this tag to see our full assortment

STAPLES that was easy:

All The Convenience, None Of The Fees

Toss Your Credit & Debit Cards, Start Using gCard

If your business accepts credit cards, debit cards, and PayPal, then you're already aware of the bite those transactions take out of your bottom line in the name of merchant processing fees.

But there's a better way. With the VersaCheck X1 software and a gValidate Authorized Service Partner (ASP) Merchant Plan, you can start accepting secure and cost-effective gCard payments.

gCards For Customers

Clients, customers, online shoppers, and anyone else who wants a more secure way to pay for virtually anything can visit gValidate.com/sc1 to sign up for a gCard and link it to a checking account. Just like using a credit or debit card, you use your gCard to make purchases by scanning the card or inputting the gCard name and number. Immediately following each transaction, you'll get an email/SMS notification from which you can release payment, block the transaction, block the gCard, or block the bank account. What's more, there are no transaction fees and 0% interest.

gCards For Businesses

But gCards aren't just an attractive way to pay for goods and services, they're also the ideal payment form for merchants. All your business needs to begin accepting gCard transactions is the VersaCheck X1 software, an ASP Merchant Plan, a connection to the Web, and an inkjet or laser printer. The software's gCard Terminal lets you quickly scan or manually input a gCard number and the transaction details and then

When you accept gCard transactions, your customers can purchase with confidence and you save.
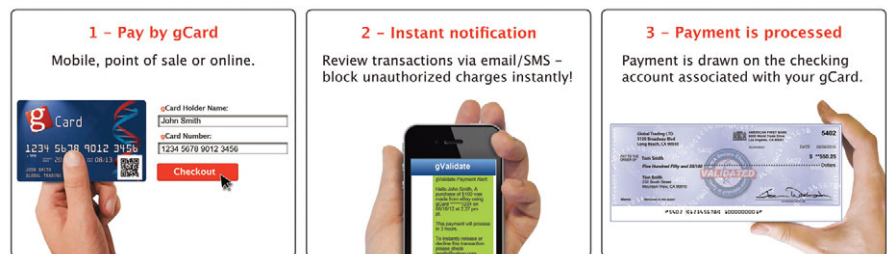
Using the gCard is as convenient as it is secure.

print an authorized DNA Secure check on inexpensive blank check paper, ready for deposit.

Subscribers to the gValidate ASP Merchant Plan enjoy numerous benefits: Unlike with credit cards and PayPal, there are no per-transaction fees for the first 1,000 transactions and an incredibly low per-transaction fee of $0.02 for additional transactions. You pay just an annual membership rate of $19.99, which can save your business over 95% in fees, compared to accepting credit

cards. If you're a CPA, financial advisor, or operate a payroll company, you can also use your gValidate ASP Merchant Plan to print and deliver DNA Secure checks to pay bills on behalf of your clients.

Payment Simplified

Businesses benefit with gCard by getting more money for the products and services they sell and users benefit by getting a more secure way to pay. Credit and debit card companies, your monopoly is about to end. ●

Adobe Creative Cloud

Save On Advanced Design Software

Traditionally, startups and small businesses with limited budgets have struggled to afford advanced creative software for Web design, videos, 3D rendering, logos, artwork, ads, and other design work.

Now with an affordable monthly subscription to Adobe Creative Cloud (tinyurl.com/9295ckx), organizations can access Adobe's complete design suite without the upfront cost.

Creativity On-Demand

Adobe Creative Cloud grants subscribers instant access to 19 of the de facto standard design applications when it comes to digital content creation, including Photoshop, Illustrator, InDesign, Dreamweaver, After Effects, Acrobat X Pro, Flash Professional, and more, for a monthly fee that is significantly less than the price for any one of these advanced products. Adobe Creative Cloud is ideal for your organization's Web site redesign, new product launch, demos, and countless other projects.

Always Up To Date

Adobe Creative Cloud subscribers stay on the cutting edge, with immediate access to the new versions of any part of the Creative Suite the moment they release. Furthermore, users get all the updates and new features Adobe releases for any of the included products, free of charge. Subscribers also benefit from any service upgrades Adobe releases during the term of their 3- or 12-month subscription.

Creation & Collaboration Services

20GB of cloud-based storage lets subscribers instantly access digital assets from any Web-connected PC. Users can also sync multiple devices

With Adobe's Creative Cloud, you can have subscription-based access to the company's top applications, and save money at the same time.

and share content with ease, so everyone involved in a project is always on the same page. Additional benefits include Adobe Business Catalyst hosting services for quick and easy Web site publishing and, coming soon, Adobe Digital Publishing Suite for creating digital publications for the iPad.

Only The Best, When & Where Needed

Adobe Creative Cloud enables your organization to tap into a wealth of advanced tools and services, without the long-term commitment and cost of purchasing the individual applications you need. ●

Mariner Software Paperless 2 For Windows
Digital Document Management

Paperless is designed to help you move your business to digital document management. No more looking through stacks of folders for old receipts, statements, and documents. Just scan the hard copy and Paperless uses OCR (optical character recognition) to help you enter the data into categories.

- Create a database of your business's important finances records

- Searchable database allows you to quickly find specific documents

- Submit digital copies of receipts to the IRS

- Automatically categorize items via Smart Collection
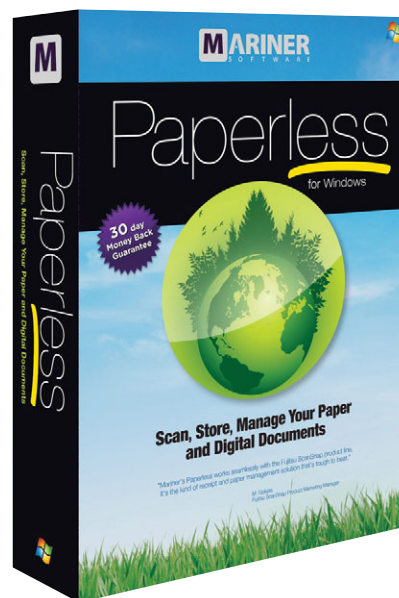
Protect All Your Devices
Kaspersky ONE Universal Security

Kaspersky ONE allows you to easily protect a wide variety of Internet-enabled devices in your home. Protect your Windows PCs and your Macs, as well as Android smartphones and tablets. Securing your devices has never been simpler!

- Safely bank, shop, surf and socialize on your Windows PC

- Protect your children when they're online on your PC and Mac

- Defend your Mac against viruses and malware

- Secure your smartphones and tablets with advance anti-virus and anti-theft security

- Wipe, block and find your smartphones and tablets if they're lost or stolen

Trend Micro Titanium For Small Business

Proactive Security For your desktop & mobile devices

This all-in-one security suite from Trend Micro helps to keep sensitive information such as credit card numbers and passwords private, and it can also automatically stop viruses and other online threats before they infect your PC. Trend Micro provides you with 100GB of secure online storage to keep your critical documents and files safe and accessible in the cloud.

• Shreds deleted files to ensure that sensitive data is permanently removed

• Protects you and employees from dangerous links on social networks

• Security software can also be installed on smartphone or tablet

• Cloud technology to ensure you're always up-to-date with protection against malware

TREND MICRO

CheckMark Payroll

Easy Payroll For Small Business

Designed for small businesses, CheckMark Payroll provides you with capabilities for direct deposit, MICR (magnetic ink character recognition) encoding for blank checks, and current tax withholding tables. Employee hours can be entered into a single spreadsheet-style window, and you can import hours from existing spreadsheet or time-clock software.

• Pay employees as hourly, salaried, or both

• Account for sick and vacation time

• Handle pre-tax deductions, such as 401K and cafeteria plans

• Print W-2/W-3 forms or file electronically with SSA

CHECK MARK™
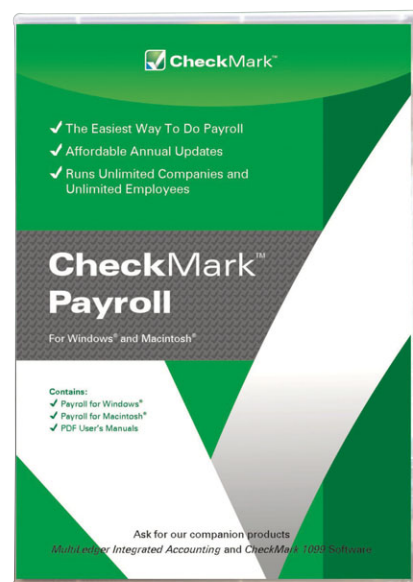
File Transfer + Remote Control
Laplink Software Laplink Gold for Windows 7

Laplink Gold for Windows 7 offers utilities to help you transfer personal files between computers, synchronize data, and remotely access network resources. The file synchronization utility enables you to keep files up-to-date for two or more computers. When remotely connecting to another PC, you'll enjoy safe and simple connection through most firewalls and routers, so you won't have to set up any special configurations.

- SpeedSync technology for fastest possible file transfers
- Many options for PC-to-PC connections, including via the Web or using the included high-speed USB cable
- Remotely control, maintain, and restart servers or computers
- Built-in security and authentication

laplink.
connect your world

Easy Video Editing
NCH VideoPad

NCH designed VideoPad with an intuitive interface that allows you to easily drag and drop video clips for easy editing. The powerful software also comes with more than 50 visual and transition effects for a stunning, professional presentation. You can also create your own soundtrack with the software's MixPad multi-track mixing tool.

- Capture video from any DV camcorder, VHS, or webcam, or import today's popular video file formats
- Create videos for DVD, HD, and YouTube file formats
- Preview effects in real-time
- Record your own narrations
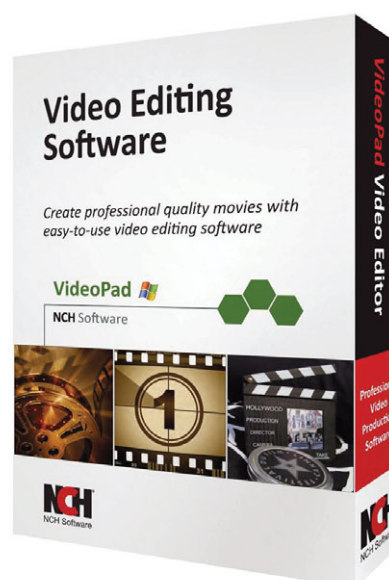
Desktops & AIOs

The variety of desktop computers is astounding. You can choose from full-size towers that take up a quarter of your desk or traditional mid-sized models; or you can select miniature systems that are about as large as a cable TV box. Or you can buy an all-in-one PC in which all of the hardware is built right into the monitor. Picking a size is relatively easy, but most vendors also offer you an array of configuration choices. The problem is figuring out how a given piece of hardware helps you to meet your needs. And that may depend on what sort of work (or play) you're doing.

Video & Image Editors

Photographers, videographers, and graphic designers need a desktop with lots of RAM (8GB is a fair starting point) and a graphics card (rather than an integrated graphics chip) to crunch through heavy-duty video and photo projects. This person's desk will probably be filled with monitors, each featuring a different application, so you may want to look for a graphics card that can span the Windows Desktop across several screens. A large hard drive is a must to help store your multimedia files.

The Busy Worker

This person has lots of applications open at once, and each program needs to run at top speed. A fast (think 2.5GHz or greater) multicore processor coupled with 6GB or more of memory should do the trick. It would be nice if the system had various forms of built-in connectivity, such as built-in Bluetooth. Front-mounted USB ports—to connect and power the employee's smartphone, tablet, or other mobile device—are also helpful.

The Spotless Desk

Because they are often in meetings with clients, managers and executives may need a computer that won't take up much space on the desk, such as an all-in-one PC or a compact desktop machine. Features that reduce the number of cables running to the PC, such as Wi-Fi or a model bundled with a wireless keyboard and mouse, help to create the immaculate, professional look.

This is certainly not an exhaustive list, but it gives you a good starting point for finding the right desktop PC. The following pages will help you to maintain and troubleshoot your new desktop computer. ●
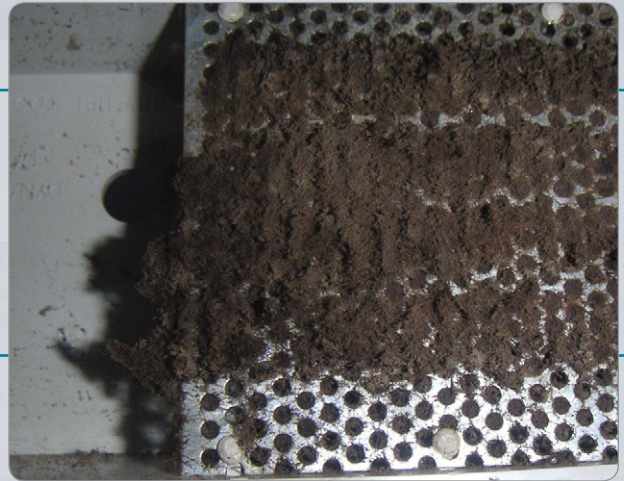
Desktop PC Maintenance

Clean, Update, Optimize

If you want to keep your desktop PC running in peak condition, you'll need to perform some regular maintenance.

Dust can cling to a fan grill, which can trap heat in your computer.

For example, a fragmented hard drive can slow your PC down, because the data is broken up and stored on different areas of the drive instead of residing in contiguous sections. With the tips in this article, you'll learn about the physical tasks and software utilities ideal for maintaining your desktop computer.

Clean The Hard Drive

Windows 7, Windows Vista, and Windows XP feature a tool called Disk Defragmenter that's designed to take the data stored on your PC and organize it, so that files will be load more quickly. In Windows 7, click the Start button, select Computer, right-click the hard drive, and choose Properties. Select the Tools tab and click the Defragment Now button. Choose the drive you want defragmented and click Analyze Disk. When it's finished analyzing the drive, Windows will tell you if it needs to be defragmented. If so, click the Defragment Disk button. (If your computer features a solid state drive, or SSD, it should never be defragmented; the process generally accomplishes nothing and can actually shorten the lifespan of the SSD.

Free Up Space

A hard drive that's full can significantly slow down your computer. You can free up space by emptying the Windows Recycle Bin, deleting temporary Internet files, removing other unnecessary files, and uninstalling unused applications. You could also opt to archive old files to a portable hard drive or online backup service, so the data isn't taking up space on your hard drive. It's a good idea to back up all of your data regularly, especially for critical business files.

Clean Up

A quick cleaning of the desktop PC can lengthen its lifetime. Use a can of compressed air to blow out the dust that's accumulated inside your computer's fans, which will help to keep temperatures down on
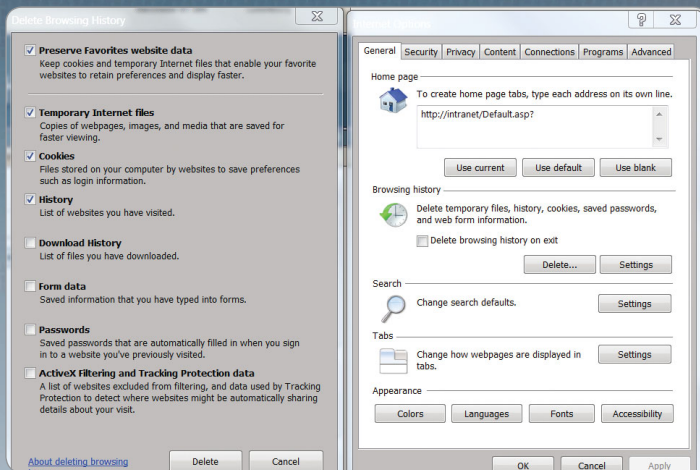
Temporary Internet files can accumulate and take up valuable space, so you should occasionally delete them.

The Disk Defragmenter utility can help speed up file loads.

It's a good idea to check regularly for updates to the drivers on your PC.

your system. A can of compressed air is also good for cleaning out keyboards, because you'll be able to blow out debris from beneath the keys. If your monitor's dusty, invest in a monitor cleaning spray and a micro-fiber cloth.
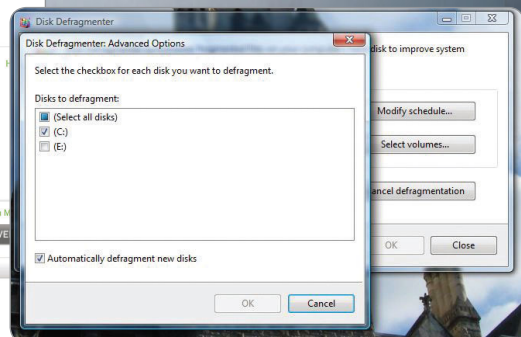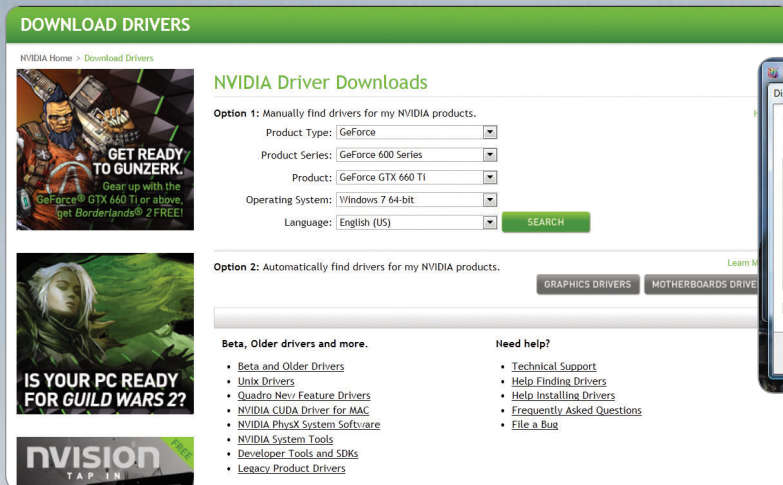
Security Software

It's critical that you use security software to protect your PC from viruses and spyware. In addition to regularly running scans, be sure that the security software's definitions are up-to-date. It's also most efficient to schedule the scan for a time when you know the PC will be up and running but will not be in use. (Although the antivirus scan can generally run in the background as you work without too much of a drain on system resources.)

Drivers & Updates

Every month or so, it's a good idea to check for application patches and new drivers. The updates typically include bug fixes and new features that will enhance the functionality of the hardware or software. Most programs include a Check For Updates (or similar) option in the menu, so you won't even need to visit the developer's website. Key drivers to check for include the PC's graphics processor, network card, and audio devices, because those tend to change most frequently.

Performing these tasks on a weekly or monthly basis will help to ensure the longevity of your desktop PC. To help you remember, try adding the items to your calendar and make such maintenance a regular part of your routine. ●

Problem Diagnoses & Solutions

Follow Our Troubleshooting Tips

When a desktop PC is running poorly (or not at all), your ability to get work done is severely compromised.

If your desktop computer isn't starting up, try moving the toggle switch on the power supply.

This article will help you to diagnose and fix common problems.

No Lights Or Sound

It sounds silly, but, first you'll want to ensure that the power cords are securely connected to the PC, monitor, and wall outlet. Now, try powering the desktop PC on again. Do you hear any noise coming from the PC? Do you see any video or flicker on the monitor? If the PC is making noise but not displaying any video, you can at least be sure the computer has power. Still no power? Find the power supply on the back of the PC and check the power toggle; it may have accidentally been switched to the Off position.

Computer Activity, No Display

In this scenario, you hear fans running and can see lights on the power button or inside the computer, but you don't see any video on the monitor. Check to see if there are any indications of power on the monitor, such as a light near the power button or a No Signal message onscreen. Most current monitors support multiple types of inputs, and you may need to cycle through the input selections to switch the display to the correct input. It's also important to make sure that the monitor cable is securely connected to both your monitor and video output port on the PC.

Random Errors

Seemingly random errors, such as files that won't load, are often a sign of hard drive issues. Fortunately, you
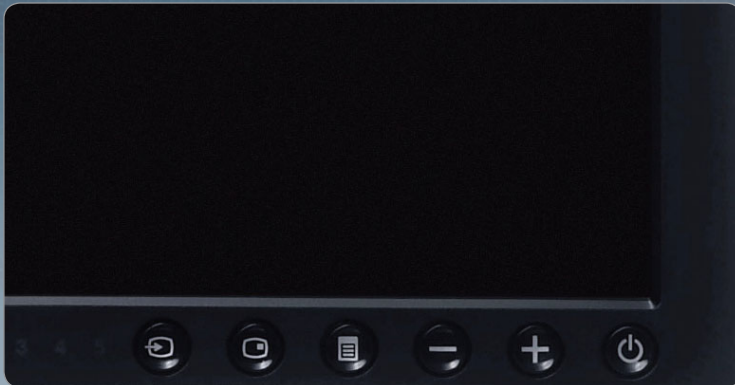
Ensure the monitor is turned on and set to display the correct input.

The Check Disk utility can help you find corrupted areas of your hard drive.

The Memory Diagnostic Tool will check your memory for errors.

can run Windows' Check Disk utility to find and repair bad sectors on your hard drive. To do so in Windows 7, click the Start button, select Computing, and right-click the drive where your operating system in installed (typically C:). Next, choose Properties and select the Tools tab. Click the Check Now button and select the Scan For And Attempt Recovery Of Bad Sections checkbox. Click Start to begin the error-checking process. Typically, Windows will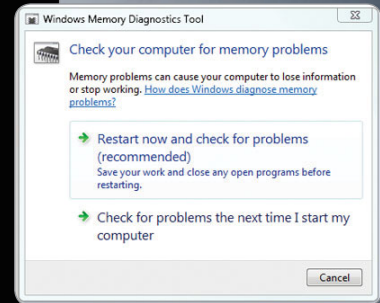 inform you that it can't check the disk while in use. Click the Schedule Disk Check button to have it run the next time you boot up. After it runs, the utility will tell you if there are any bad sectors and will attempt to move files from those sectors. In some cases, you may need to replace the corrupted files with backed-up copies.

Random Freezes

Although lockups and freezes can be caused by a number of issues, faulty memory is one of prime suspects. Windows 7 includes a Memory Diagnostics Tool that will examine your memory modules, looking for for errors. To run the utility, click the Start button, select Control Panel, and type Memory in the search box in the upper right corner. Click Diagnose Your Computer's Memory Problems; this will bring up a window allowing you to select when to run the utility. You can choose to restart the tool immediately or to check for problems the next time you boot up. When the test finishes, it will indicate if it found any errors in your memory. If any are found, you may need to replace the modules.

Further troubleshooting may be required if these suggestions don't result in a fix for your issue, but at the very least, you've narrowed the problem down a bit and at least you can be sure that it's not a hardware or power difficulty. ●

Sales of Verizon's last Windows-powered smartphone, the HTC Trophy, were disappointing.

MICROSOFT NEWS

A New Logo Debuts

Microsoft has unveiled a new logo to go with the company's release of multiple new product versions, including Office, Xbox, and Windows itself.

Xbox Live Adds NBC News

You thought Xbox was just a game console, but Microsoft has been busy adding content partners to help broaden the device's appeal and expand its usefulness. The latest addition? An NBC News app that will allow access to breaking news as well as video content from *Nightly News*, *Meet the Press*, *Dateline*, *Morning Joe*, *Hardball with Chris Matthews*, *The Rachel Maddow Show*, and others. Xbox Live already streams content from Netflix, Hulu Plus, Amazon Instant Video, YouTube, Verizon, Comcast Xfinity TV, HBO GO, Crackle, Epix, and MLB.TV.

New Dev Tools Released

Microsoft has released to the Web the latest versions of its development suite, including Visual Studio 2012 and .NET 4.5, in an effort to encourage developers to start coding for Windows 8 and other new Microsoft platforms. The official developer release will be in mid-September.

Hotmail Grows Up

Microsoft has retooled and relaunched its venerable Hotmail email client, branding the new service as Outlook.com. The company says that Outlook.com will deliver a cleaner look, less obtrusive ads, and new connections to social media sites, as well as integration with Skype.

Top Teachers Honored

Sixteen U.S. teachers have been named winners of the Partners in Learning U.S. Forum, and were honored for inspiring student learning and impacting positive change through technology in the classroom. Sponsored by Microsoft, the annual event recognizes innovative teachers and school leaders who "creatively and effectively use technology in their curriculum to

Microsoft

Microsoft is releasing a new logo to complement its new product offerings.

XBOX LIVE.

The Xbox is much more than just a game machine.

Hotmail has morphed into the much more sophisticated Outlook.com.

help improve the way kids learn and increase student success."

WINDOWS NEWS

Windows 8 Personal Licensing

If you're a computer builder, here's some good news: With the release of Windows 8, Microsoft will be offering what it's calling a PULSB, or Personal Use License for System Builder. This means that instead of having to buy a full retail copy of Windows (as was the case when one built a Windows 7 machine, for instance), the company will be offering a version of Windows 8 to be installed as the main operating system on a single system meant for personal use, or in a virtual machine running on an existing PC, as long as that machine is running a legal copy of an operating system.

Do-Not-Track Still The Default In IE 10

Microsoft has reaffirmed its commitment to shipping Internet Explorer 10 with Do-Not-Track enabled by default. (IE 10 will ship with Windows 8, and a version for Windows 7 will ship soon, says the company.)
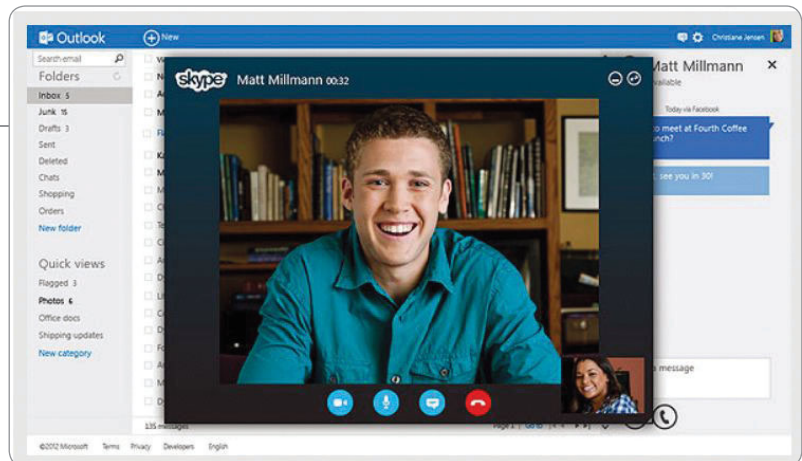
Windows SkyDrive Revamped

Microsoft's SkyDrive cloud storage suite has been revamped, using the same tile-based design as the company's other new products, such as Windows 8 and Windows Phone 8.

Verizon To Offer Windows-Powered Smartphone

For the first time in over a year, Verizon is talking about offering a Windows smartphone. The Windows Phone 8-powered device will be supplied by Nokia. Verizon's previous Windows-powered smartphone, the HTC Trophy, did not do well, but the company may be banking on the allure of the phone's new operating system. ●

Windows 7 Tips & Tricks

Many of us use Microsoft's Windows 7 operating system on our home or work computers, but it's likely we haven't taken advantage of all of its features. This month, we'll look at how tweaking Microsoft's Search Index can improve our search experience.

When we have trouble remembering where we saved a specific file, we often resort to plugging the file name (or what we can remember of it) into the Search field on the Start menu, pressing Enter, and waiting patiently as Windows scans the system and returns results.

Win7 indexes the most common files on your computer, including anything in the Documents library, your email, and offline files, by default. It doesn't include system files or program files in the index because it is rare that you would need to search in those locations. Tweaking the Search Index settings, however, will result in faster and more efficient searches.

To access the Search Index in Windows 7, click the Start button, select Control Panel, and type indexing options into the Search field. Click Indexing Options and a dialog box appears that details the number of indexed items and locations.

Add Or Remove Locations

You can configure the Search Index to fit your needs, adding or removing locations as you see fit. In the Indexing Options dialog, click the Modify button and the Indexed Locations dialog box opens. Here, you can add or remove locations by selecting or clearing checkboxes in the Change Selected Locations list. If you include a folder, you don't have to include all of its subfolders; select only the subfolders you want indexed. The bottom

panel displays all indexed locations. The folders you unchecked in the top panel will appear in the Exclude column of this bottom panel.

It is important to note that you don't want to index your entire computer because doing so makes the index too large and can cause your system to slow down. For the best results, add only the folders you use frequently.

Pause The Search

Although it might seem reasonable to have the option to pause a search if necessary, Microsoft ad-vises letting the search process run uninterrupted in the background. However, if you must pause the process, do so for only 15 minutes at a time. Restarting a search involves a good deal of overhead.

For Those Advanced Users

If you want more ways to configure how Windows indexes files, click the Advanced button in the Indexing Options dialog box. Under the Index Settings tab you can choose to index encrypted files (you'll need to have an encryption program installed and/or be us-ing Win7 Enterprise/Professional/Ultimate versions), delete and rebuild an index (note that Win7 may prompt you for an administrator password), or change the location of your index. Under the File Types tab, you can change the types of file extensions the index inventories.

Change How You Search

We don't have control over many things in life, but sometimes being able to choose the locations Windows searches for files can make finding those files and completing tasks a little easier. ●
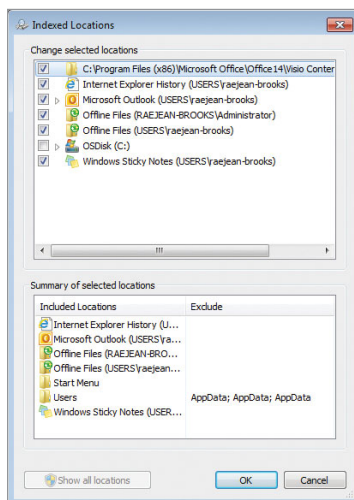
To change where Windows searches for files, access the Indexing Options dialog box via the Control Panel.
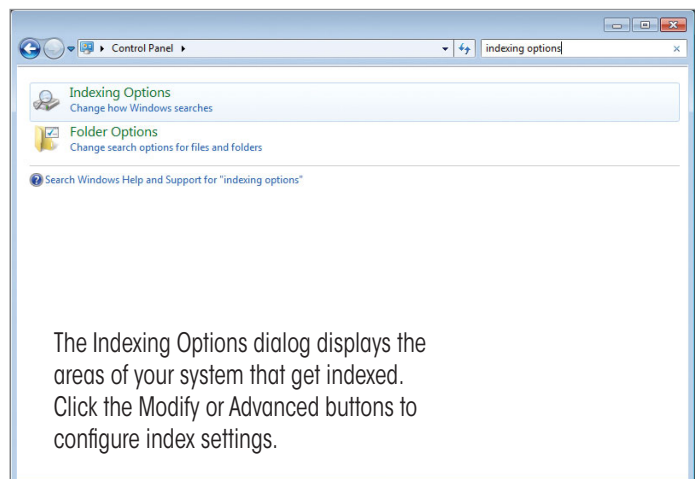
The Indexing Options dialog displays the areas of your system that get indexed. Click the Modify or Advanced buttons to configure index settings.
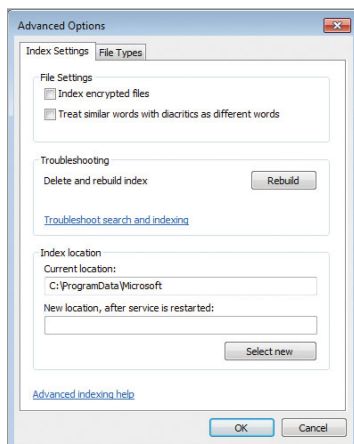
Advanced Settings options let you change which file types Win7 indexes, adjust index settings, and delete or rebuild the index, should problems arise.
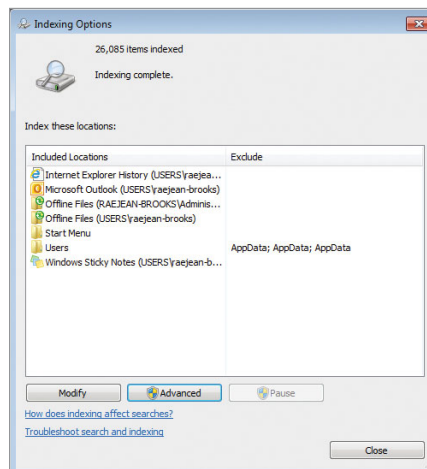
The Indexed Locations dialog box is the place to go if you want to change locations Win7 indexes. If you don't want Windows to search an entire location, click the desired entry and select only the subfolders you want to index.

Get The Fax

Why Your Business Still Needs The Ability To Fax

Epson's WorkForce® Pro WP-4530 is an inkjet all-in-one with fax capabilities.

Faxing is still a staple of the business world, especially when it comes to official documents, contracts, and other forms requiring a signature. A dedicated fax machine is the easiest way to send and receive faxes, but you can also send faxes directly from your PC and smartphone. Here, we'll examine some of the methods you can use to create faxes.

A Fax vs. An All-In-One

Dedicated fax machines are still readily available and are a wise choice for businesses that want an uncomplicated device that works simply by dialing a number. You could also invest in an all-in-one printer, which is a good option for small businesses that have limited space and want a single machine for printing, copying, scanning, and faxing. For example, Epson's WorkForce® Pro WP-4530 all-in-one provides you with a 30-page, two-sided automatic document feeder that allows you to quickly scan (and fax) one- or two-sided documents.

The fax machine will typically require a landline phone number, but some vendors provide a digital fax service that lets you send and receive fax material over the local network. The latter could be a good option for small businesses that have moved to a VoIP phone system that relies upon a Web connection for voice communication.

Use A PC

Most modern PCs don't offer a phone line (if your is one of the exceptions, consider using the Windows Fax And Scan utility built into Windows 7), so a traditional fax service may not be an option. However, there are a plethora of online fax services that allow you to upload what you want to fax and provide a destination
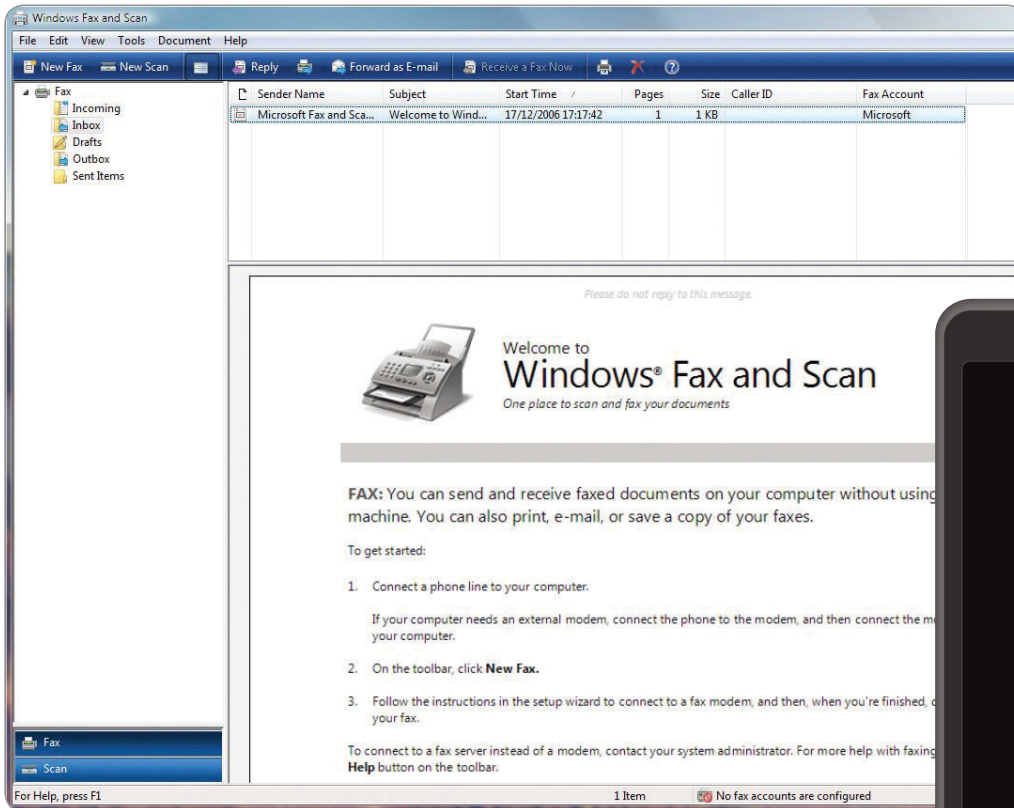
With an online fax service, you can use your smartphone's camera to fax documents that you snap.
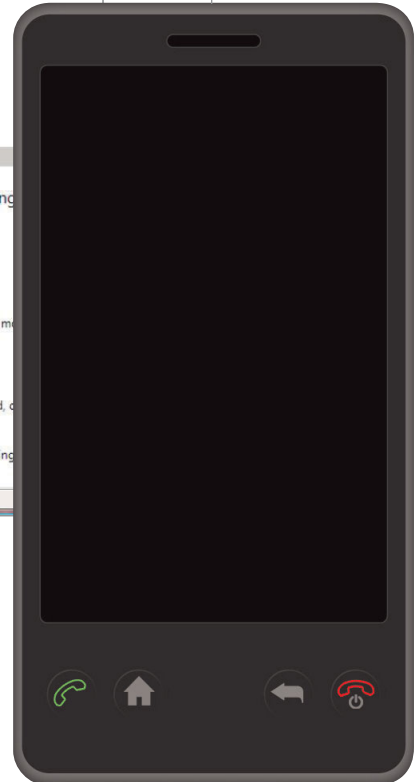
Windows Fan And Scan is built into Windows 7, but your PC will need a connect to a phone to use the service. Thus, an online fax service may be more efficient.

fax number. We found that a number of websites even let you send a limited number of faxes for free, so those with light faxing needs won't have to pay anything. Note that using such a service to fax to international numbers typically incurs an added cost.

You can also sign up for an online service to receive faxes; in this case, the online provider will give you a real fax number you can list for clients and customers. Typically, any received faxes will be sent to you as an email attachment (usually as a PDF file) to your personal email address. Pricing will vary by the number of faxes you expect to receive per month. You can find plans that cover everything from receipt of an occasional fax to businesses that collect hundreds of faxes daily.

Smartphone Faxing

Smartphone faxing is similar to faxing with a PC: You'll need to sign up for an online fax service in order to send and receive faxes with your smartphone. But unlike a PC, you can use the camera built into your smartphone to take pictures of the pages you want to fax, so you can create faxes on-the-go. Typically, you'll download an app from the online fax service; the app will allow you to snap an image and then upload the image you want to fax. From there, the online fax service will enhance the image (perhaps adjusting the brightness or increasing the sharpness) and create a PDF that will be sent to the fax number you provide. Some online fax services also work with your smartphone's email client, letting you send an email with attachments to the fax service's email and providing the number to which you want the attachments faxed. Inbound faxes will be delivered to your phone just like traditional email. ●

Promote Your Business

Making The Most Of Social Media

One of the strongest ways to promote your products and services is via word of mouth, and social media is the key to harnessing its power for the benefit of your business. However, the social media sword is double-edged, and one wrong move can end up damaging your company if you aren't careful. In this article we'll explore some of the pros and cons of leveraging social media to grow your business.

Social Media Roulette

Chances are you don't have the time or manpower to maintain a presence on every social networking site. Facebook, Twitter, Pinterest, Flickr, and other social media sites all have their own strengths and weaknesses, so choose one or two to run with. Twitter, for instance, is great for businesses that have frequent updates to report about prod-

ucts, developments, and industry-related news. If your business doesn't have much to Tweet about, however, you may have a hard time retaining followers. Facebook is great for establishing two-way communication with your loyal customers, but organizations that cater to a niche market may find it difficult to compete for "Likes." Pinterest is great for products that have obvious lifestyle applications, such as arts, crafts, and recipes, but your company's technology deep-dive whitepapers may not get many pins.

Building Buzz

If you're passionate about your products, then it'll show and people will catch the fever. But nothing kills their enthusiasm more quickly than finding that the company's Facebook page is being used for nothing more than press releases. Engage with commenters, establish

a dialog, "Like" their comments, and do your best to answer questions. Keep up a healthy presence to keep customers coming back again and again. You can also use social media as a way to reward loyalty, through promotions and giveaways, but make sure you're aware of the social media site's policies regarding this behavior.

Take The High Road

When your company deals with hundreds or thousands of customers, it's likely you will eventually encounter one who had a negative experience. Do your best to rectify the situation as quickly as possible. If the customer cannot be appeased, avoid engaging this person if possible, but be wary of how you look to your other customers at all times. Moderate comments by removing any that are not productive, but don't do the same to cover up perceived bad behavior on your part. It's a fine line, but defusing the situation amicably should always be your goal.

Branch Out

While the ultimate purpose of your social media presence may be to promote your company, you may find more success if you do a little work to promote partner companies and events that pertain to your industry. For instance, an auto repair

If you're passionate about your products, then it'll show and people will catch the fever.

shop might want to Tweet the details of nearby car shows; as a result you may find a lot of automobile enthusiasts following your Tweets. If your bakery gets its honey from a local beekeeper and honey farm, let your customers know, and you may be

able to negotiate for lower prices the next time you buy.

Social Media Minefield

Customers have more ways than ever to let their thoughts be known, which can be both good and bad

for business. Having a social media presence is an important step is taking charge of the conversation and bending it to your will. If done properly, hash tags, "Likes," and pins can become some of your most powerful sales and marketing tools. ●
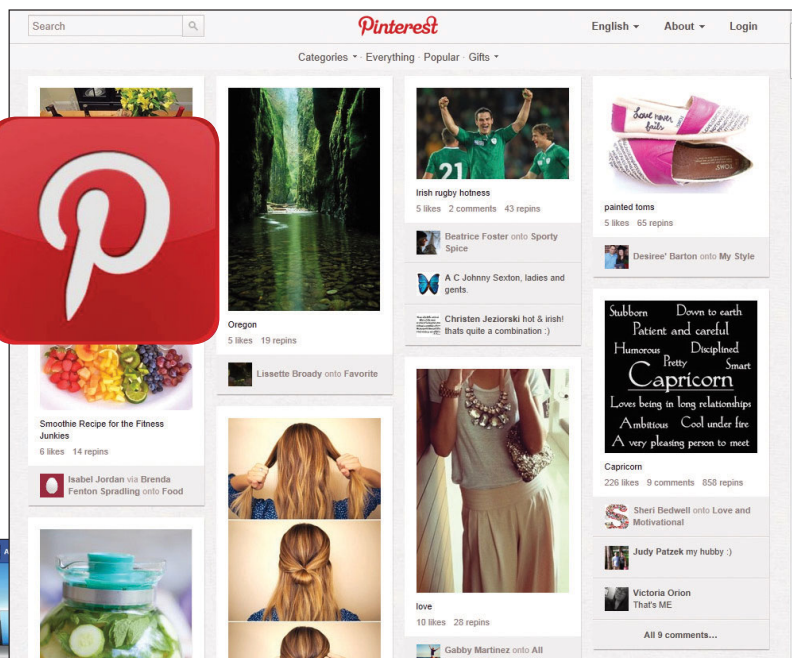
Twitter is perfect for publishing links to new products and industry-related Web content.

Facebook features a couple different ways for businesses to commune with their customers.

Pinterest is a good option for businesses that deal with people's hobbies.

Linked-In is a professional network site, which is good for employers looking to hire.

Mobile Marketplace

Business Apps *For Android & Windows Phone 7 & iOS*

Some powerful business tools are floating in the sea of smartphone apps. Each month, we'll highlight some of the best ones for Windows 7, iOS and Android platform users. (Unless otherwise noted, Windows Phone 7 apps are available in the Windows Phone Marketplace, Android apps in the Android Market, and iOS apps in Apple's App Store.)
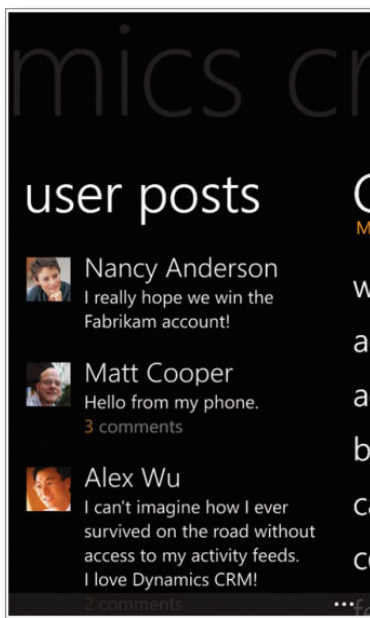
Microsoft Dynamics CRM Activity Feeds

Windows Phone 7

Microsoft Dynamics CRM is great for cataloging interactions with clients, accounts, and leads. With the Activity Feeds app, however, you have even more access to the information you need no matter where you are. It lets you submit and view notifications and activity statuses in real time so you can go into every client meeting or conference call with the most up-to-date information. Activity Feeds works with Windows Phone 7.5-based devices and any deployment of Microsoft Dynamics CRM, including on-premise, Microsoft Dynamics CRM Online, and partner-hosted.
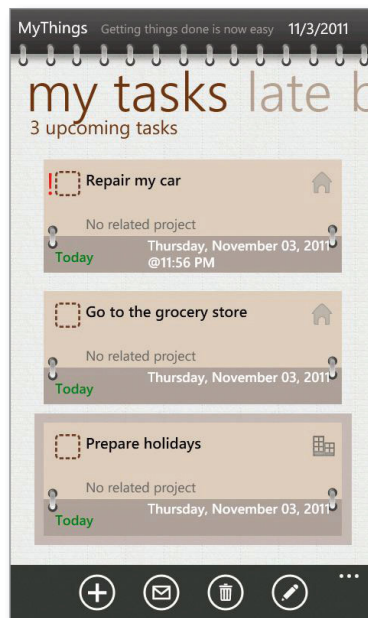
MyThings Pro

Windows Phone 7

To-do list apps are a dime a dozen on the Windows Phone Marketplace, but what sets MyThings Pro apart from all the rest is its numerous features. You can back up your tasks, add reminder alerts to tasks, create recurring tasks, and post live tiles to your Start screen for important tasks that show you at-a-glance when a deadline is approaching. Any meetings you create in Windows Phone Calendar are automatically imported to MyThings Pro. Other things we like about this app include the ability to manage tasks by project, associate a location with each task, and share your tasks via email and SMS.

mySEO

Windows Phone 7

If you have a Web page and you're interested in its ranking and visibility to search engines and netizens, then take a look at Softkey ZAO's mySEO. This Windows Phone app lets you check your page rank, backlinks, search engine-indexed pages, and discover social links. You can also get information regarding the change in page rank for multiple domains (the trial version only lets you check two domains). To quickly check in on your most important domains, simply pin them to your Start screen. Supported directories include Google +, Linked In, Yandex, Yahoo!, Google, and Alexa.

Pronto

iOS

Pronto, from Createful Ltd. is a streamlined reminders application that you can use to set up multiple events and organize them as you see fit. For instance, tap the plus icon to add a new category, then tap the category to see the associated reminders and the number of days until the event occurs. You can also add to-do items to each reminder and check them off as you accomplish them. Pronto also supports gestures: Swipe left or right to edit, delete, or rename an event or to-do item. Tap the Bell icon on any event to enable event alerts and tap the Repeat icon to establish recurring events.
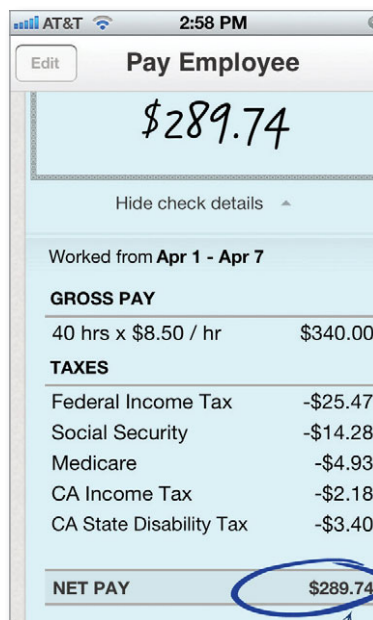
Snap Payroll - Paycheck Calculator

iOS

You can't put off doing payroll until it's convenient for you; employees frown upon that. To quickly and accurately calculate paychecks, try Snap Payroll – Paycheck Calculator from Intuit. To get started, just input the hours worked, pay rate, and work week for each employee to calculate how much to pay the employee and what to deduct for taxes. The application lets you calculate payroll for any W-2 employees, keep a record of checks calculated, and store employee payroll data. Other features include automatic update of tax rates and bundled Federal and state withholding forms.

iAgree NDA

iOS

If you're in a competitive business, then you know trust is hard to come by. iAgree NDA is designed to give you peace of mind when you need someone to sign a binding agreement. This app takes a video snapshot of the signatory to ensure the information gets to the right person and he or she fully understands and accepts the terms of the deal. In addition to the video, iAgree NDA also captures the time, date, and geographic location at which the agreement took place. When the first party has finished recording the agreement, he or she can forward it to everyone else involved.
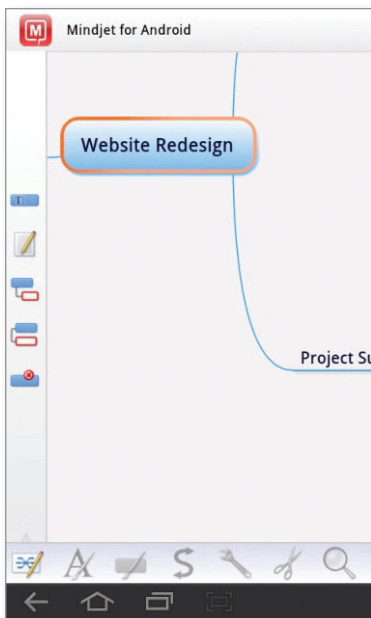
Mindjet

Android

Brainstorming, planning, and tracking the progress of new ideas is easier than ever with Mindjet. This Android app connects with Mindjet Connect, a Web-based portal that lets you create detailed mind maps from multiple devices and sync them to the cloud. Mindjet also supports gestures, for instance, to bring up the colors menu and apply a new color to a given topic or subtopic, just swipe the screen. You can also access PDFs, text files, and other file types stored in Connect to view from your device. Mindjet works with Dropbox, so you can easily access files in your Dropbox folders without having to leave the app.
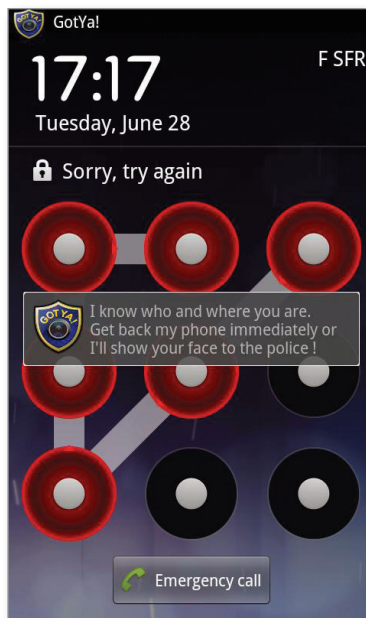
GotYa! Face Trap!

Android

GotYa! is one of the smartest security apps we've seen. It uses your front-facing camera to take a snapshot of anyone who incorrectly inputs the screen lock code, tags the images with the time and the phone's current location on Google Maps, and then forwards it to you via email or Facebook. GotYa! is a standalone program, so the photos and information are stored locally. The application also lets you perform a handful of actions via SMS commands, including lock and unlock your device, request a location, request a callback, play an alarm sound (even if muted), and send a notification if the criminal switches out the SIM card.

App Of The Month
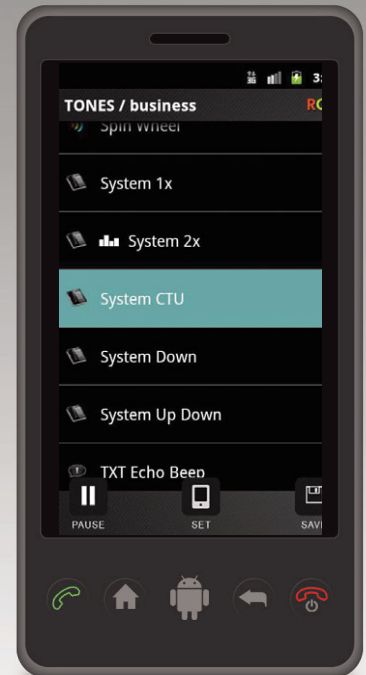
Business Ringtones RCP Ringtones

Android

Most smartphones come with a couple dozen ringtones preinstalled, but if you prefer business-friendly ringtones that are simple, elegant, and unobtrusive, then you're out of luck. Unless, that is, you install RCP Ringtone's suite of Business Ringtones. Here you'll find 55 normal ringers, modern office tones, and business professional ringtones. The collection also includes beeps, chimes, and other sounds you can use for alarms and alerts. The company prides itself on the sound quality of its ringtones, so you can expect each one to sound great on your Android device.

Bring Your Own Device To Work

Is BYOD A Problem For Small Business?

Tablets may provide employees with new ways to stay productive on the road.

Smartphones are one of the most popular devices employees want to bring into the office.

Susan has just purchased a wonderful new tablet that will allow her to check her work email and edit important documents even when she's out on the road, and she's wondering how she can connect to the company's server with her new device. Meanwhile, Joe wants to take some work home and would like to use his personal flash drive to transport the files back and forth. What could be wrong with allowing your employees to use their personal equipment for work purposes? Here, we'll discuss the pros and cons of staff members bringing their own devices to the office and worksite.

Benefits

Small businesses don't typically have enough extra resources available (in terms of both money and training) to provide employees with high-end portable devices, even if the devices do give employees a new, mobile way to get things done. Allowing personal electronics to be used in the office can save you a good deal of money, because you won't incur costs for purchasing the device, a mobile broadband plan, or for training the employee. A recent report from mobile application developer Good Technology found that 72% of businesses were supporting BYOD (bring your own device) programs, and of that group, half of the employees covered all costs for the devices and data plans. The latter typically costs around $80 a month, according to the study, which could add up to a savings to the business

Some workers may ask if they can use their personal laptops in the office.

of nearly $1000 a year—just for one employee's data plan.

Another advantage of BYOD for business is that the technology is often cutting edge, because employees tend to invest in tools with the hottest features. For example, new smartphones and tablets offer a front-facing camera for videoconferencing with clients and co-workers back in the home office while the employee is on the go. Some offices even allow employees to bring in their own laptops, which for processor-intensive tasks such as image-editing, may run faster than the models supplied by the company. The result? The newer technology allows employees to be more productive than they might have been without BYOD. It's also a way to keep workers happy, because they'll be using their preferred devices for work.

Dangers

Typically, when hardware is issued to an employee, the device includes security that's managed by the business, and the worker is expected to follow an "accepted use" policy. With BYOD, you lose some control over the security of the device, because you'll need to walk a fine line if you choose to limit how the employee can access files and the office network on his or her own device. For example, you might tell a worker that you would allow access to work email on a smartphone only if the employee installs a security tool that's been sanctioned by the business.

Businesses that must follow compliance rules, such as HIPAA (the Health Insurance Portability and Accountability Act) or PCI DSS (Payment Card Industry Data Secu-

rity Standards), should enact strict BYOD policies, because such mandates generally include data residing on devices owned by an employee. Another issue could arise when a BYOD employee opts to leave the company or is fired, because you'll likely want to retrieve any business data from his personal device before he moves on.

The Plan

If you choose to allow BYOD, it's important to create a policy with clearly defined rules. By laying out expectations and minimum security requirements, you'll be taking steps to protect the business and safeguard sensitive business data. You may even opt to pay for all or part of the cost of such items as security software, to encourage them to follow the rules. ●

How To Buy

An All-in-one Printer
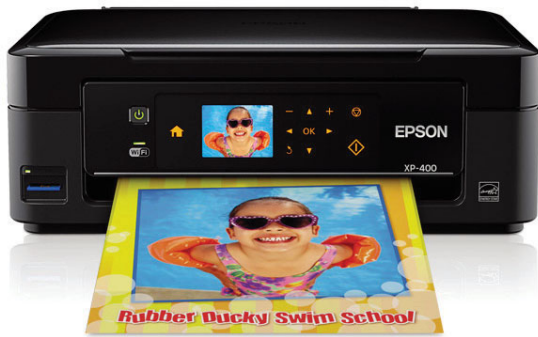
Expression® Home XP-400 Small-in-One™ Printer
from Epson is an AIO that can produce quality prints.

Brother's MFC-9125cn pounds out 19ppm in
both color and black and white.

All-in-one printers are real space-savers. Nearly all include the ability to print content (both documents and photos) from your PC, copy documents, and scan material, sending the image to a computer or email. Some AIO printers also offer a built-in fax modem, so that the device can also function as your fax machine. Here, we'll provide some advice for those who are looking to invest in an AIO printer.

Print Capabilities

If you want to create lab-quality photo prints, consider a good inkjet all-in-one printer, because the ink-based technology often provides better results with high-resolution, borderless images than one can get with most laser printers. For example, Epson's Expression Home XP-400 offers an optimized dpi (dots per inch) of 5760 x 1440 to produce photos worth framing, and it also provides red-eye removal, photo restoration, and exposure compensation features to enhance your digital prints. The Expression Home XP-400 can even print from today's smartphones, tablets, and other mobile devices.

Those looking for a high duty-cycle printer that can deliver great prints quickly may prefer a laser AIO. For example, Brother's MFC-9125cn is a color laser printer that can produce 19ppm (pages per minute) in both color and monochrome. You'll find a 250-sheet paper tray that can store letter or legal-sized paper, as well as a single-sheet manual-feed slot for envelopes and specialty media.

Scan & Copy

Maybe the most important feature in an all-in-one's scanner is the size of its bed. With a wide-format AIO, such as HP's Officejet 7500A, you can scan legal-size documents, flyers, and other large-format material. The Officejet

The wide-format Officejet 7500a can scan content that's up to 8.5- x 14-inches.

This Brother MFC-J430w features a built-in fax machine and automatic document feeder.

7500A will scan materials as large as 8.5 x 14 inches, and its scan resolution of 4800 x 4800 ensures a top-quality reproduction. HP also includes an ID copy feature that allows you to copy a two-sided identification card onto one side of a page. You can scan the content to a networked PC, a memory card, or to an email. The size and quality of scanner also reflect on the AIO's copy quality, as anything you can scan you should also be able to copy.

Fax

People looking for a printer for their small or home office will likely want to consider one with built-in fax. An AIO printer with an automatic document feeder, such as Brother's MFC-J430w, makes it easy to fax long documents, because you won't have to re-enter the fax number or insert the next page for each individual piece of paper you want to fax. The MFC-J430w offers you a 20-page automatic document feeder and can fax in both color and monochrome.

Wireless

With a wireless AIO printer, any printer on the network will be able to connect to it for both prints and scans. This means that you won't need to connect a USB flash drive or memory card to save your scans, because the images can be sent directly to your PC. Another benefit of the wireless connection is that you'll be able to locate the printer wherever it's most convenient for everyone who needs access to it. For example, let's say that you have four family members who need to share the printer. Rather than placing the printer in the office at the far end of the house, you could locate it in a communal room in the middle of the house that's close to everyone, as long as that area receives a good Wi-Fi signal. ●

How To Buy

A Wireless Router

MIMO (multiple input, multiple output) technology uses multiple antennas to send and receive multiple signals simultaneously.

Setting up a wireless network in your home or office is practically a necessity when your PC, Mac, smartphone, tablet, printer, and TV all offer the ability to connect to the Web. Having everything networked together makes Web content readily available to each device, with the added benefit of simple file- and printer-sharing, audio/video streaming, and more. In this article we'll provide some buying advice for those who are new to wireless networking or just looking to replace their old wireless routers.

802.11 Alphabet Soup

Every wireless router typically supports a handful of wireless standards, the earliest of which was 802.11a/b, for ranges and speeds up to 115 feet and 54/11Mbps (megabits per second), respectively. Today's routers also support 802.11g and 802.11n. The latest standard, 802.11ac Draft (expected to be finalized in late 2012), supports the fastest speeds yet for consumer and business wireless routers, up to 866.7Mbps. Ranges on 802.11ac devices will likely be

less than 802.11n-based routers, but many of these routers will have the ability to switch to a 2.4GHz-based 802.11g frequency to maintain a connection to devices outside of the 5GHz frequency band's optimum range.

Range Rage

If you've ever bought a wireless router and found the actual range and the range listed on the box to be at odds, there's a reason for that. The ranges listed on the box are often based on best-case scenarios,
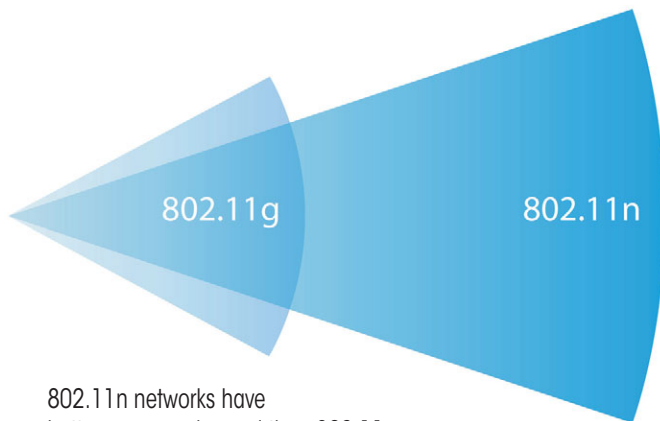
802.11n networks have better range and speed than 802.11g.

The WPS button streamlines the process of connecting Wi-Fi devices to your network.

Wireless Standard	Frequency	Max Data Rate (Per Stream)	Max Indoor Range
802.11a	5GHz	54Mbps	115 feet
802.11b	2.4GHz	11Mbps	115 feet
802.11g	2.4GHz	54Mbps	125 feet
802.11n	2.4GHz/5GHz	150Mbps	230 feet
802.11ac	5GHz	866.7Mbps	N/A

assuming few if any obstructions and zero interference. Your home or office is composed of various materials, some of which yield to wireless signals more easily than others. Other devices that use the same frequency can also cause interference, which cuts down on the effective range, as well. The best advice is simply to buy a router that has significantly more range than you think you need.

Don't Sweat The Old Stuff

One of the things Wi-Fi does quite well is allow for backward compatibility. For instance, routers that support 802.11g also let you connect aging 802.11b devices. If you do connect an older device however, the drawback is that everything else connected to the router drops back to 802.11b's maximum data rate of 11Mbps, regardless of each device's native Wi-Fi protocol. So when you're shopping, use the most common Wi-Fi protocol your devices support as a minimum requirement.

MIMO Info

MIMO (multiple input, multiple output) is a technology commonly found on wireless routers that uses multiple antennas to transmit and receive multiple data streams simultaneously. For this reason, you may find routers that are capable of higher data rates than are possible on a router capable of communicating only with a single stream. 802.11n routers are capable of supporting up to four MIMO data streams. 802.11ac Draft routers can support up to eight. If data rate is important to you, look for a wireless router with MIMO technology.

Protective Protocols

Securing your wireless network should be one of the first things you do when you set up the wireless network. Thankfully, most routers for sale today make it easy to encrypt your network using WPA2 (Wi-Fi Protected Access) security.

Many routers also support WPS (Wi-Fi Protected Setup), which is a multi-mode technology that makes connecting devices to your secured wireless network very simple. PIN Mode lets you input the PIN located on a sticker on the router to connect a WPS-capable device. Pushbutton Mode works lets you press a button on both the router and the device to set up the connection. NFC Mode requires that you bring the connecting device within close range of the router. USB mode lets you use a USB flash drive to transfer settings. Each technology ensures that you don't have to memorize a pass key, which makes connecting devices easy even for novice users.

Buy Better Wi-Fi

Buying a wireless router is like buying any other piece of technology: Make sure it has the power to handle what you do now, and a little extra to handle what you'll be doing a year or two from now. ●

Tips & Tricks

Download Library Books To Your eReader

Most public libraries now offer eBooks that you can download at no charge and read for a limited time on your eReader. Note that before you get started, you'll need to have a library card number and PIN for the branch from which you plan to regularly "check out" the eBooks. We'll show you what you'll need to do to begin reading free library eBooks on your portable electronics.
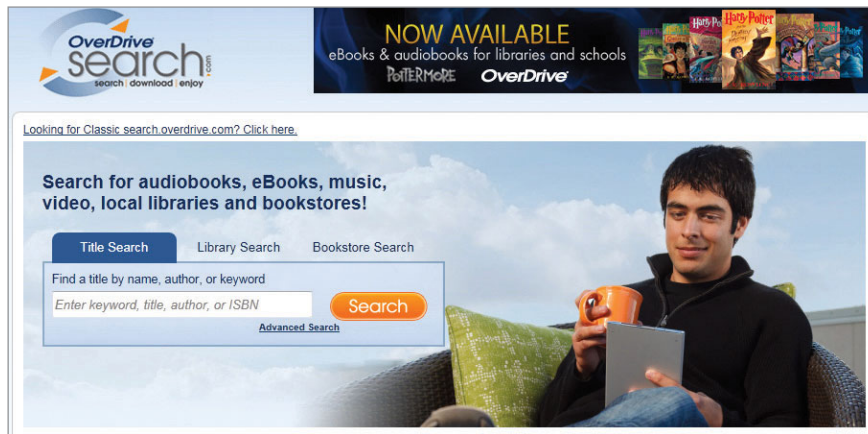
OverDrive's search tool can help you find out if your local library offers eBooks.

OverDrive

Most U.S. libraries use the Over-Drive service (www.overdrive.com) to loan out eBooks, so you'll want to start by ensuring that your library lo-cal library uses OverDrive to let you search for eBooks, audio books, and other digital content. To do so, visit http://search.overdrive.com, select the Library Search tab, and enter your ZIP code in the Search field. If available, you can proceed to installing the OverDrive Media Console, which is an app you can use to add libraries, check out titles, and read eBooks on your portable devices.

The OverDrive Media Console is available for a wide variety of eBook readers, including the iPhone, iPad, Kindle, Android-based smartphones and tablets (including Barnes & Noble's Nook lineup), BlackBerry smartphones and tablets, and Win-dows Phone smartphones. Down-load a version that will work on your eReader of choice, which gener-ally entails opening the device's app search tool and entering OverDrive Media Console in the search field. (While we tend to think of eBooks as mostly being read on mobile de-vices, those who prefer to read on a desktop or laptop computer will find that OverDrive Media Console is also available for both Windows and Mac-based systems. You can

download it from www.overdrive.com/software/omc.)

Adobe Digital Editions

We found that some eBooks also require the use of Adobe Digital Editions, which is a program that's designed to let you manage and read copy-protected eBooks, such as those in the PDF/A and ePUB formats. The software also lets you organize and annotate your eBooks. You can download the program from the Adobe website.

To use Adobe Digital Editions, you'll also need to authorize your device with an Adobe ID, so that you can read—but not share—copy-

OverDrive is available for a wide variety of tablets, eReaders, smartphones, and computers.

Adobe Digital Editions may be required when downloading some eBook formats.

protected books. The (free) Adobe ID helps to ensure that the digital publications and books you download aren't forever locked onto one device or computer. To create an Adobe ID, visit http://tinyurl.com/ca7ko2 and select Create An Adobe Account. Follow the onscreen instructions to utilize Adobe's verification tool.

Downloading Your eBooks

This process will likely vary slightly from library to library, so we'll outline the key steps you'll need to follow. The easiest way to start is by opening the OverDrive Media Console on your portable reading device, because the app will lead you to a shortcut for your local library's website. For example, on our smartphone, we simply opened up the OverDrive app, selected the Get Books tab, and chose Add A Library. Entering our ZIP code in the Search field brought up our local branch's website, which we selected to permanently add the quick link to the app. Then, we clicked the link for the library, which opened up to the Web page's eBook search tool.

Finally, we've reached the fun part! Now you get to browse through the titles and check out your eBooks. Note that you should ensure that the format of the eBook is compatible with your device. Most local libraries will list compatible formats on the search page, but you may need to select the book to see further information about the file type. Once you've found the book you want to read, click the Add To Cart (or a similar selection option, such as Reserve Now) button for the format that works on your device. Now you can proceed to the checkout and complete the transaction. Our local library featured a My eCart tab, where we were required to enter our library card number and PIN to finalize the transaction.

eReading

When you've finished selecting your eBooks or audiobooks, the library will place your checked out items into an account area where you can download the books. You likely see something similar to "My Bookshelf" or "All eTitles Out" that will display a list of the titles you have available to download. (Similar to a real book, you'll only be allowed to read the eBook for a limited time, before the title is overdue. The checkout term can vary, but two to three weeks is common.) Once you find the download area, select the Download option to transfer the eBook or audiobook to your eReader.

The downloaded content should appear in the OverDrive Media Console app on your portable device. Note that if you're reading on
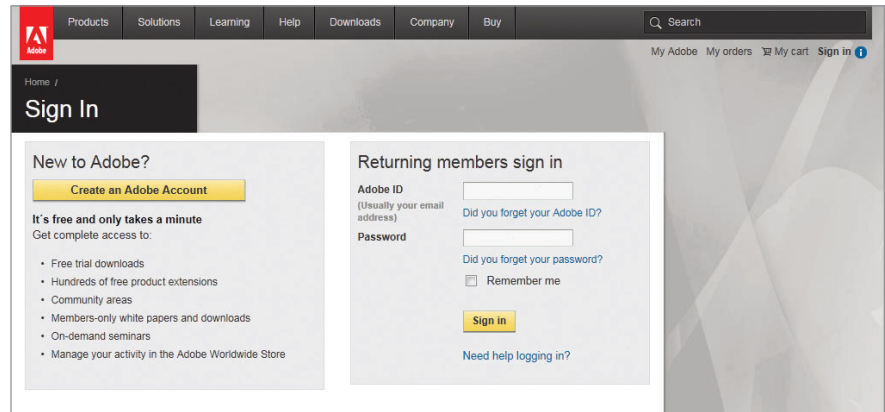
With an Adobe ID, you can read an eBook on multiple devices.

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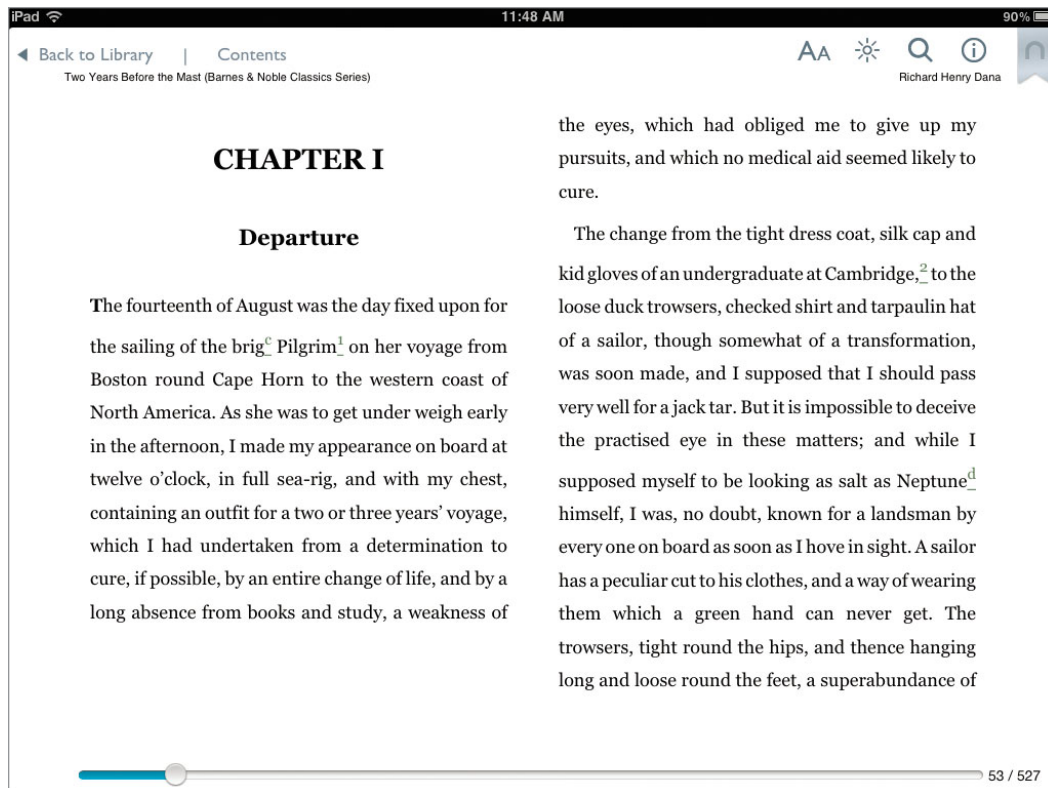
Depending on your device, a downloaded library eBook will look much like the print version, but with added features and interactivity.

Tips & Tricks

Improve Your Photos

Even basic photo-editing applications can improve those less-than-perfect shots. Before you delete a digital image that's blurry, dark, or otherwise unacceptable, consider these photo-editing tips.

Your image editor may have "auto-fix" options for some of our suggestions. Doing it yourself takes longer but often results in a better outcome. In our examples and images, we'll try to use generic terms that could apply to just about any photo editing software; just keep in mind that your editing program may use slightly different terms and labels.

It's In The Details

Image editing falls into two categories: detail and whole-image. If the overall image is too dark, red, etc., select (some software uses CTRL-A to select an entire image) and work on the shot as a composite. This is easiest, and it avoids the need to ensure edited pixels blend in with the surrounding area.

However, many edits—especially facial ones, such as correcting red-eye or teeth whitening—work best if you edit just the affected area. One easy way is to select an area slightly larger than the target edit. Apply the Feather effect, which makes edges fade away. Now, make your edits, and the edges of the selection should blend right in.

Alternately, you can copy the selection to a new layer (assuming you have this feature) and edit the layer; then adjust its Opacity so some of the original shows through. This may require going

This shot of a roadside vegetable vendor doesn't need to include the entire truck. Cropping out most of the background except for a few vegetables gets the idea across.

overboard (for instance, lighter than what's actually needed) on your edits.

Sharpen It

Sharpening makes fuzzy images crisper by increasing the contrast between pixels of different color or intensity. (Be careful: Too much sharpening makes images look grainy.) Look for the Unsharp Mask function (or look for Auto Sharpening).

Unsharp Mask settings are usually Amount (amount of sharpening) and Radius (number of pixels to adjust around the edge). A 150% Amount with a 10-pixel Radius is a good place to start. Use your Preview (or similarly named) function to see adjustments as you make them.

Blemish Removal

For blemish removal, teeth whitening, and removing red-eye (where the flash makes eye pupils red), your image editor may have built-in "fix-it" tools. Look for Red-Eye Fix, Quick Fix, Auto Fix, Smart Fix, Teeth Whitening, or similarly named tools. For teeth whitening and blemishes, increase the Brightness or make the selection lighter (look for Lighting or Brightness/Contrast and Adjust Color or Color Variations). For red-eye, adjust the color and/or darken the selection—or use your software's automatic redeye-removal tool.

What's Your Focus?

Capturing the scene surrounding your subject can set the mood—or be a distraction. If the latter is the case, first try cropping the image. If this doesn't solve the problem, softening or darkening the background, or adding special effects, can make a big difference.

To experiment, select the area to change (easiest is a vignette, in which the edges of the photo gradually fade out). First, draw an oval around the area of focus and then use the Invert function to reverse the selection to the background. Use the technique in "It's In The Details" section to adjust color, lightness, etc.

The layering, feathering, and other tips mentioned here work for a variety

This attempt at capturing a vineyard in fog resulted in a washed-out appearance (left side). To make it more vibrant, we selected and increased the contrast in the area above the vines, then darkened the entire image slightly (right side).

This entire sunset shot was sharpened with an amount of 150% and a radius of 1.5 pixels to increase the crispness of the clouds.

of circumstances. In particular, duplicating an image (or an area) to another layer and working on it instead of the original is a good practice and a great enabler. It lets you get just the right amount of adjustment and prevents you having to save the file in multiple versions for safekeeping. ●

Find It Online

HouseParty
http://houseparty.com

Planning a party and want to cut down on costs? Visit HouseParty to find out if Party Packs containing the products and brands you enjoy are available to help sponsor your party. You'll also enjoy access to exclusive products from party sponsors, including coupons and decorations. Examples of Party Pack perks include advance copies of movies, kitchen items, t-shirts, and gourmet chocolate. To receive a Party Pack, just apply to host, and select your favorite from the current list of available sponsors. Once you receive the Party Pack, you can distribute the items any way you care to.

Nextdoor
https://nextdoor.com

Looking for a way to get to know your neighbors? Nextdoor is a private social network that allows neighborhood residents to build stronger relationships. Local members can ask for advice, exchange local recommendations, share neighborhood information, view updates, and many other things. And unlike a neighborhood mailing list, you'll be able to choose how you'll be informed—from emails about each post and a daily digest, to a no-email option with which you just check the website for new info whenever you care to. You choose what information you want to share, including your physical address, so members will see only what you allow.

WeTransfer
www.wetranfer.com

This file-sharing tool allows you to send files up to 2GB in size per transfer, which is handy if your email client restricts attachment size. Even better, you can attach as many files as you want to the transfer, up to the 2GB limit. You can send the files to up to 20 different email addresses and all files are kept on the WeTransfer server for two weeks, so your friends and colleagues won't need to download the files right away. When the files reach the recipients, you will receive an email that confirms they have received the email, and you'll also get an email when the file is downloaded.

Swizzle
http://theswizzle.com

Looking for an easy way to unsubscribe from email lists? The Swizzle Sweeper is a tool that's designed to help you stop receiving junk mail, daily deals mail, so-called special offers, and bulk mail. Swizzle Sweeper currently supports Gmail,

Google Apps, Mac.com/Me.com, Yahoo! Mail, and AOL Mail. Swizzle indicates that the company never sees your email password, nor does it store the email. When the process is finished, Swizzle tells the email provider to take away access. Swizzle also offers a Swizzle Gallery tool that lets you view news and deals from popular brands, but you won't need to commit to subscribing by entering your email.

Dayzipping

www.dayzipping.com

Dayzipping is a great website for those looking to find exciting new places around them, as well as for people looking for a fun excursion on their next vacation. The website allow users to share day trips (defined as a journey you can complete in one to eight hours), and users can search to find trips that may suit you best. Just search for your destination and view the nearby trips, typically with a description of the type of people for whom it may be ideal. Of course, members can also create their own trips, which can be shared with friends and colleagues.

Meetings.io

http://meetings.io

Why download a video conference client when you could video chat using your Web browser? With Meetings.io, clients, customers, or colleagues can just join your hangout on the Meetings.io website. You can video chat with up to five people at a time, and the online client will resize the video windows, so you can clearly see everyone. You'll also be able to share your screen or specific applications with others in the hangout, so the service is ideal for product demos and presentations. When you sign up for a personal room, you'll get a personalized address that you can give to others to set up regular meetings. ●
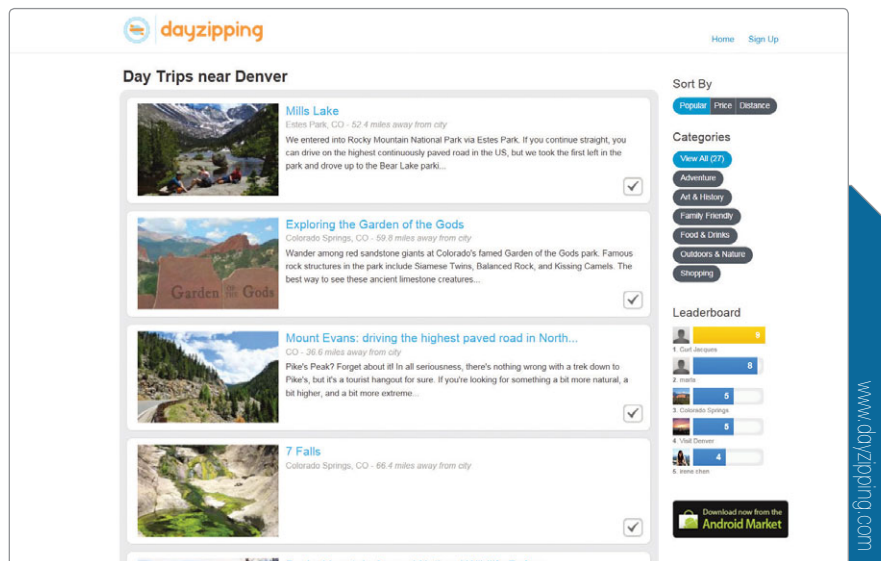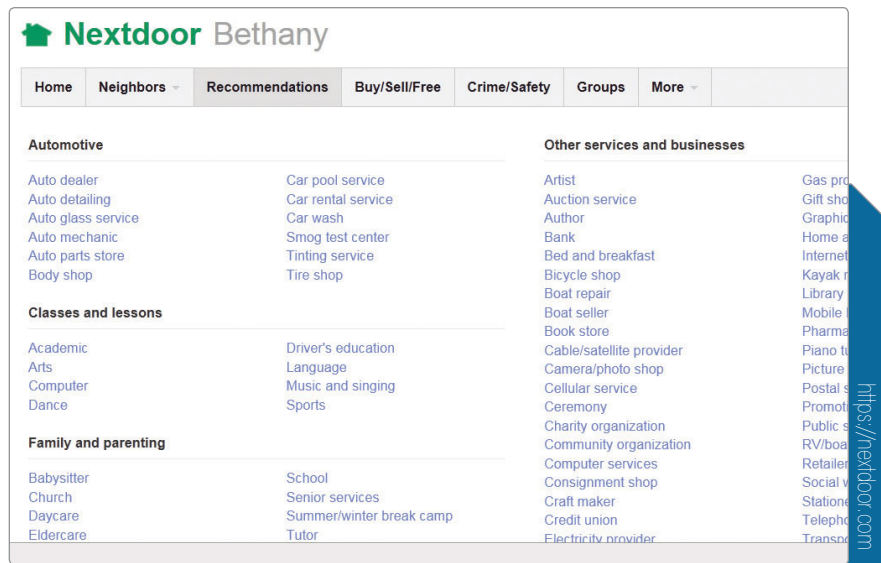
Online Reviews

Can You Trust Anonymous Analysis?

Leon
2/11/2012 11:22:33 AM
Tech Level: ▮▮▮▮▮
Ownership: ▮▮▮▮

●●●●● Great for Video Work and not a Bad Still Camera

Pros: Price, swivel LCD and the sensor, image quality and relative ease of use. For 750 even the included kit lense is not bad. I have a D2X and D200 and a lot of good Nikkor glass. I am 6-7 years behind the curve in DLSR bodies, so I am very excited what the Nikon sensors (not Sony sensors in the D2s and 200s) can do. I also have large format printer and print quite often. Not shooting for money anymore, so I saved 750 over the D7000. I usually go for the motto get it right the first time but that would mean getting the D3 and I do not have $6000 lying around or even 3K for the D300. The image capturing is good enough and I have 24" prints to prove it. Video is better than any handycam I've used.

Cons: Not good for older lenses, that's my only beef. And the manual operation is not that great. But my D2 and d200 really, I bought this camera so I can shoot video. My wife is happy too. Also the color is not as neutral as the other I have my own glass and they look ridiculous in this camera. A 55-200 was part of the deal and to be honest that wor work any way than the big 2.8 lenses. I am sure one can argue about the autofoucs and the exposure database but have not dropped it hard yet but the plastic body may be suspect. Battery also does not last as long.

Other Thoughts: I miss the control I have with the D2 and D200 but my wife does not. also because it is small it do you are a press photographer. If it gets stolen 750 is an easier pill to swallow. The swivel LCD is really a good thing f Nikon did this right. For parents who need to take photos/videos of their kids in badly lit gyms, this with a couple of Y makes it very useful and fulfilling.

5 out of 5 people found this review helpful. Did

Sensorium Studios
1/11/2012 4:57:14 PM
Tech Level: ▮▮▮▮▮
Ownership: ▮▮▮▮
✔ Verified Owner

●●●●● Amazing upgrade from D3000

Pros: - Swivel Screen
- Takes Video
- easy to clean
- Adaptable Lense.
- Live View Finder
- Easy to use

Cons: - slow shutter, My D3000 had a faster shutter..
- Video isnt THAT great, lag's a bit when alot is going on.
- Shoots in NEF not DNG native (need a converter)

Other Thoughts: I noticed my Girlfriends (SAME EXACT CAMERA) has a slower View Screen, and it render's the p slower.

1 out of 2 people found this review helpful. Did

Adam
1/1/2012 10:54:21 AM
Tech Level: ▮▮▮
Ownership: ▮▮

●●●● Solid body, good quality pics, proprietary battery

Pros: Solid construction
Lots of control over shots
Great low-light performance
Excellent LCD display

Cons: Proprietary battery with no 3rd party alternatives
Chews batteries
Zoom ring is a bit rough

Other Thoughts: I've been snapping a lot of pics over the past few days, and I'm impressed with the amount of control the d5100 allows. If you want a fully automatic mode, fully manual, or anywhere in between, the camera has a setting. Some of the settings take a little digging to find, but in general the options are well laid out.

---

4 reviews for Harry's Wonder Bar   `Search Reviews`

Sort by: Yelp Sort ▾ | Date | Rating | Elites' | Facebook Friends'

4 reviews in English

● 63
▣ 376
Scott M.
Kansas City, MO

★★★★☆ 4/28/2010 ▣ 3 photos

Being out-of-towners, we didn't really know what bars we should visit during our night in Lincoln. While hanging out at The Spigot we chatted with a group of girls who, after listening to out stories of past barhopping vacations, recommended we check out Harry's Wonder Bar.

We crossed the street to Harry's and found ourselves in a nice little dive, the kind of place we really like. Much better than some of the fratty bars we'd experienced the same night!

We ordered beer, but evidently mixed drinks are supposed to be the way to really enjoy this place. The bartender made that point very clear to us, in almost a snide manner.   :)

To get his point across, he immediately whipped up a concoction for me to take a picture of. While other bars are stingy, this place serves up a basic mixed drink strongly poured in a beer mug.   At least in the demonstration we were given, anyway.

Was this review ...? `Useful ●` `Funny ●` `Cool ●`

🔖 Bookmark   ✉ Send to a Friend   🔗 Link to This Review   💬 Add owner comment

● 1
▣ 235
Agent C.
Boulder, CO

★★★★☆ 9/18/2011

A fun, dive-y, working-class sort of bar. Perfectly situated to use the "facilities" and have a quick drink afterward when you need it on game day, after parking in a nearby lot and

Yelp.com uses a filter system to try to reduce the chances of fake reviews.

Detailed reviews are generally more reliable than shorter ones.

According to a 2012 survey from Search Engine Land, 72% of consumers surveyed said they trust online reviews just as much as personal recommendations, while 52% indicated that a positive online review made them more likely to use a local business. That said, how do we consumers know whether we can trust an anonymous online evaluation? After all, mightn't the review have been posted by the business owner or by an employee? Or by someone with an axe to grind? Here, we'll examine what's being done to ensure that such reviews are on the up-and-up.

Beating The Game

In effort to either drive business or torpedo competitors, companies have been known to hire people or use software to submit seemingly genuine reviews that talk about the quality of the service (or lack there-of) and overall experience. Some websites, such as Yelp (www.yelp.com), now use a review filter that attempts to place less helpful reviews in a special "Filtered" section. For example, opinions that are only a sentence (or just a rating) may be

Search The Review

Most computer programs and some paid posters use the same format and phrasing for each review. If a review seems suspicious, try inputting a few key phrases into a search engine to see if the text has been repeated in other online reviews.

El Siboney Restaurant
900 Catherine St, Key West, FL 33040
📱 305-296-4184 💻 Website ✉ E-mail 📋 Menu

Ranked #31 of 264 restaurants in Key West
⭕⭕⭕⭕⭕ 952 Reviews

Price range: $1 - $20
Cuisines: Cuban
Good for: Families with children, Local cuisine, Dining on a budget
Dining options: Breakfast/Brunch, Lunch, Dinner, Takeout, Delivery, Late Night, Dessert
Update restaurant details

65 visitor photos

952 reviews from our community

Write a Review

87% Recommend

Excellent	594
Very good	240
Average	72
Poor	23
Terrible	23

Rating summary
Food
Service
Value
Atmosphere

952 reviews sorted by Date ▾ Rating ☐ Show reviews by locals first (22) English first

"Not so good..."
⭕⭕⭕⭕⭕ Reviewed August 2, 2012

Jeanessa
Puerto Rico
Contributor
⭐ 12 reviews
🌐 Reviews in 2 cities
⭐ 3 helpful votes

I ordered a palomilla (steak) with rice and black beans. The steak was poor quality I could not cut the meat at all. I then ordered picadillo whi... was really good. The service was good though.

Was this review helpful? **Yes**   Problem with this r...

See 10 more reviews by Jeanessa for Key West

"OMG!"
⭕⭕⭕⭕⭕ Reviewed August 1, 2012

melwal

Now this is what Cuban food should be about. Super flavorful and delicious. Get there before 5pm and you will get a table. It gets packed, but

N/A
5/3/2010 2:24:12 PM
Tech Level: ⬛⬛⬛⬜⬜
Ownership: ⬛⬛⬛⬜⬜
✅ Verified Owner

🟡🟡🟡⚪⚪
Pros: nice zoom, autofocus
Cons: HEAVY, no IS

Reviews with virtually no explanation for the rating aren't very helpful and shouldn't be heavily relied upon.

"Truthful hotel reviews are more likely to include words that relate directly to the hotel experience."

If a location has a lot of reviews that skew toward good or bad, you may be able to make a reliable guess based on the average rating.

---

moved by Yelp into the Filtered section, because an explanation that brief is not likely to prove helpful. Reviewers who rarely post may also have their opinions moved to the Filtered section. Such filtering has been criticized though, as it can cut out both legitimate and fake evaluations. Because there's currently no reliable way to differentiate between the two, most websites don't bother with a filtering system.

What To Look For

Researchers at Cornell University recently performed a study in which a large group of people wrote false positive reviews for 20 Chicago hotels. Three volunteers were then selected to compare a mix of the genuine and deceptive reviews. Sadly, none in the group were able to agree on which ones were faked. The researchers dug a bit further, using a computer to analyze the text and find words and phrases that most frequently occurred in the true and false evaluations.

The study found that truthful hotel reviews are more likely to include words that relate directly to the hotel experience, such as check-in and price. With false reviews, things that set the scene, such as vacation or business trip, were often the focus; this makes sense because the writers have no actual experience on which to base a legitimate evaluation and therefore they use a more narrative style. Real reviews tended to be more informative in nature, using less superlative and exaggerated language than deceptive evaluations. Knowing that, you may want to throw out some overly positive or negative reviews, such as one-star or five-star ratings, to get a better idea of the true consensus.

Examine The Mean

When asked if they trusted online customer reviews as much as personal recommendations, 28% answered that they did, so long as there were multiple customer reviews. This suggests that people are more likely to come to a reliable conclusion when they have a variety of online opinions to consider. The Search Engine Land study also found that 65% of consumers read between two and 10 reviews and 7% read more than 20 reviews when searching for products online. The quick access to a variety of opinions, assuming they are available, provides most people with the confidence necessary to believe they are making a wise decision. ●
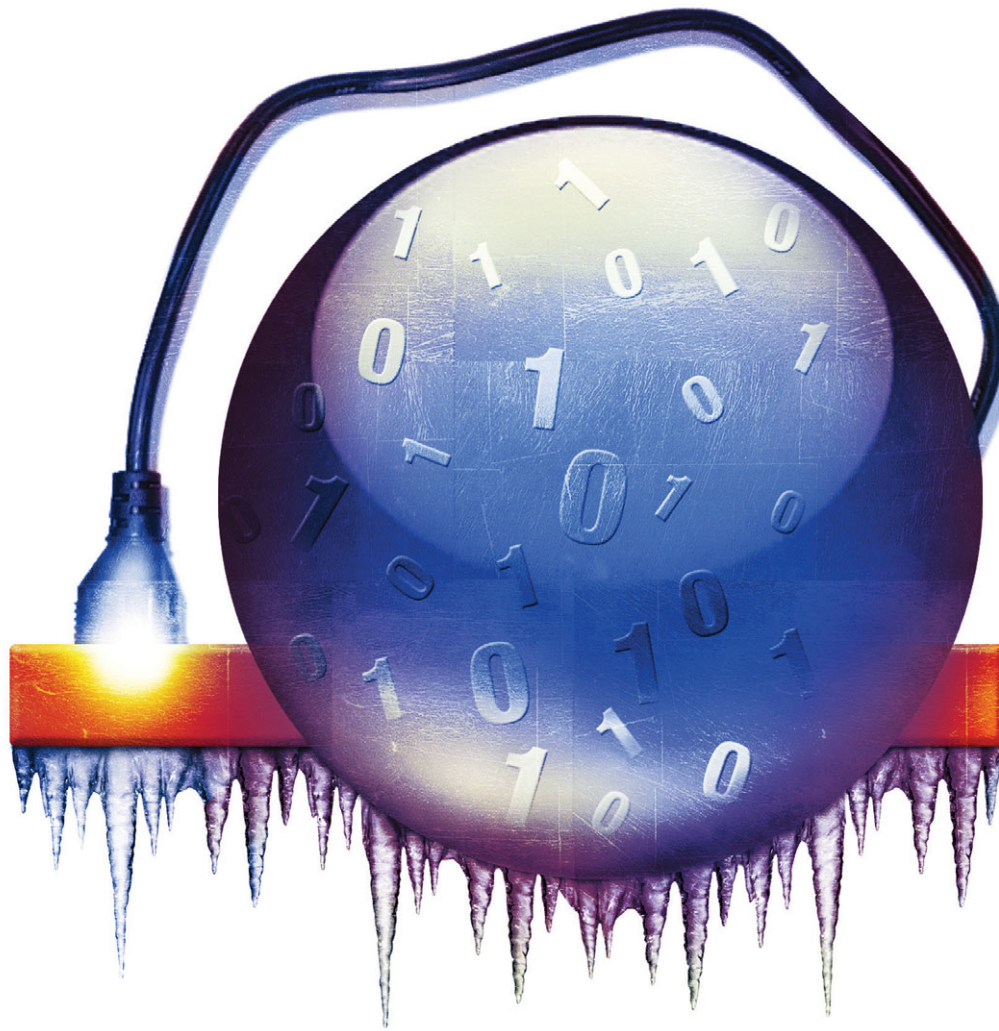
Maintenance Basics

Keep Your Computer Cool

The various components in your computer generate a significant amount of heat, and if that heat isn't dealt with, then your components will slowly cook, reducing their effective lifespans. But there are several things you can do to help ensure that your computer remains cool for as long as you use it, and in this article we'll describe a few of them in detail.

Temperature Sensors

Most PCs have built-in temperature sensors, but you need third-party software to look at the sensors' readouts when the operating system is up and running to determine if your PC is being cooled sufficiently. Download a temperature monitoring utility and use it to get a sense for how hot your components get under idle (with no programs running) and load (with several graphic-, memory-, and CPU-intensive programs running). Some of these utilities let you set alarms and maximum heat tolerances, but it's best to establish a baseline at idle and under load before you tweak anything. Keep in mind, sometimes the preconfigured limits do not apply to your hardware, so the software may report temperatures that are too high, even if the PC has been designed to operate at those temperatures.

Case Concerns

Your PC's case is the front line in the war against heat. Vents and case fans combine to make sure that the air inside the case is constantly on the move. Fans on the front of the case are typically intake fans, so make sure they remain unobstructed and have access to cool open air. The fan in the rear of the case is most often an exhaust fan, and its job is to remove the air that has been heated by your components. Some PCs also feature side panel fans that assist in cooling the hard drive bay or graphics card, or top panel fans that assist in exhausting warm air. With more air coming into the case than going out, you have what is known as *positive* air pressure, which helps ensure that dust doesn't build up on your components. With *negative* air pressure, more air is being exhausted than taken in, which is good for components that get very hot and
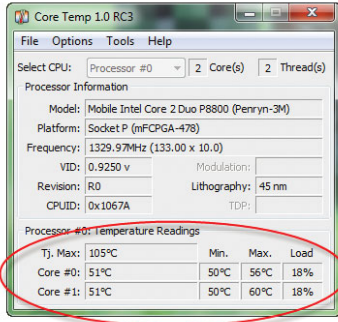
A third-party temperature monitoring utility can help you get a handle on the heat.

Image courtesy of CoreTemp.

need air replaced quickly. Neutral air pressure is a good all-around choice, as well.

Defeat Dust

Dust buildup on your PC components can trap heat and increase their running temperatures. Left unchecked, the excessive heat will reduce the components' lifespans, leading to premature failure. Dust buildup on fans also reduces their cooling efficiency. At regular intervals, shut the PC off, unplug it, remove the side panels, and use a can of compressed air to blow the dust off of fan blades and components.

Keep Your Cool

When your PC is running, you can bet that heat is present. But as long as you follow these simple procedures, you can make sure that heat doesn't become a PC-killing problem. ●

Chill Your Hot Laptop

Proper cooling is just as vital with a laptop as on your desktop machine, but you can't just add a fan like you can with your desktop, and disassembly can be a harrowing (and warranty-voiding) experience. Nonetheless, there are a few things you can do:

• Use canned air to blow dust from vents (make sure laptop is unplugged and turned off)

• Use a laptop cooler to supplement the unit's internal cooling mechanisms

• Immediately get the laptop serviced if a fan stops working or the unit becomes unusually hot

• Only operate the laptop on hard surfaces, and never block the vents

Dust reduces the efficiency of your case fans, so make sure to clean them regularly.

Use compressed air to dust off fans, vents, and PC components.

Tips & Tricks

Know The Lingo

Abbreviations for phrases and jargon reduce the amount of typing you need to do when chatting via instant messenger or text messages. Here are some of the most common abbreviations.

AFK

Stands for "away from keyboard" to let someone know you're not in front of your computer right now.

AFAIK

Short for "as far as I know," to indicate that the comment is true to the best of your knowledge.

BBIAB or BRB

Use these abbreviations to let the recipient know that you'll be away for a short while with BBIAB (be back in a bit) or BRB (be right back).

GJ

This abbreviation of "good job" is a quick way to tell someone he did well.

IDK

Short for "I don't know," and used when you are unable to answer a question or query.

IMHO

Demonstrate some modesty before a statement by saying "in my humble opinion."

JK

Abbreviation of "just kidding," and tells the recipient that you were just joking around.

KK

This shorthand indicates that the message has been acknowledged.

L8R or TTYL

The first is shorthand for "later" or "see you later" when saying goodbye, or if you plan on communicating in a bit, you can use TTYL (talk to you later).

LOL

Let your chat buddy know his comment was funny enough to make you "laugh out loud."

NVM

Short for "never mind," which tells the recipient to disregard the last comment.

PLZ

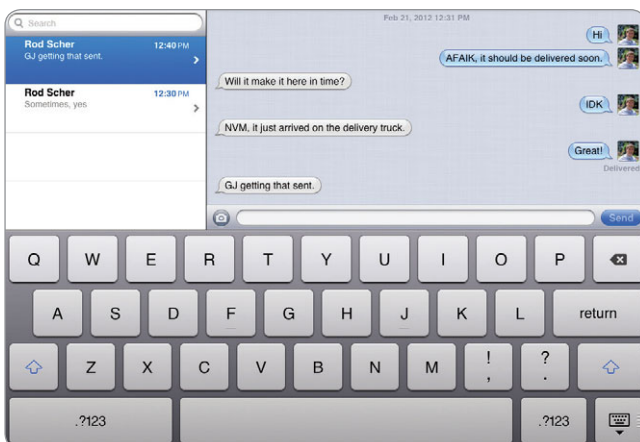When asking for help, it's always nice to say "please."

SFSG

Let your recipient know that everything is OK thus far by saying "so far, so good."
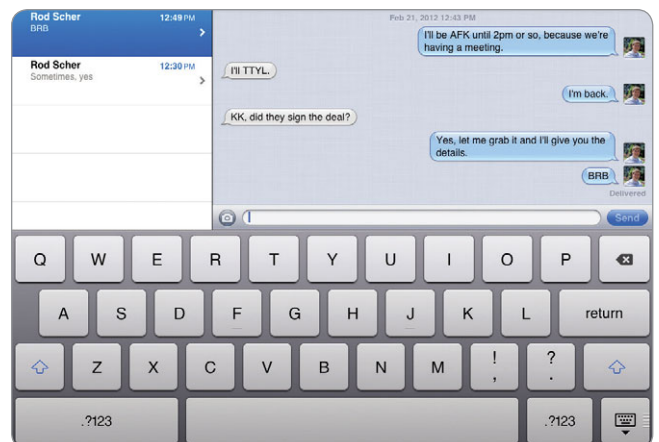
TBH

You can let someone know you are serious about a statement by leading with TBH, or "to be honest."

TYVM

This is an abbreviation for "thank you very much." ●

Abbreviating long phrases helps reduce the amount of typing you do.

There are a number of abbreviations for letting people know when and if you'll be around.
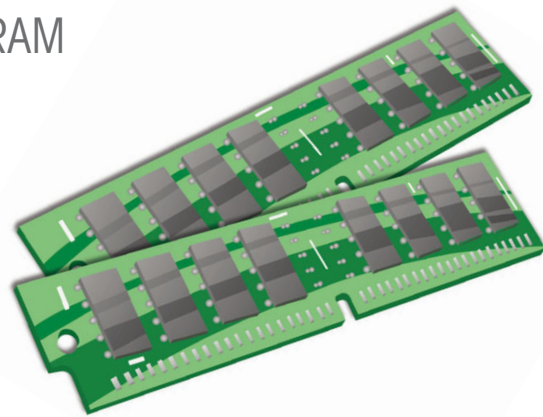
Memory Matters

Speed Up Your Computer By Adding RAM

A memory upgrade may be the simplest, most cost-effective modification you can make to your system. Adding RAM will speed up every aspect of your computing, noticeably improving your productivity, gaming, music, and movie experiences.

Today's applications are tremendously powerful; but that sophistication comes at a price: It takes some serious horsepower to run today's software. Thus, the memory upgrade.

It's not always easy to know what type of memory you need; often the easiest way to find out is to refer to the users manual that came with your system. Alternatively, open up the case, (carefully) remove a memory stick, and bring it in to your local retailer and ask for some help; knowledgeable sales associates at stores such as Staples can look at your RAM and match it to larger-capacity memory of the same type.

As long as you don't exceed the amount of RAM that your system can handle, there's no such thing as too much memory; buy all that you can afford—it's a good investment and an easy upgrade. ●
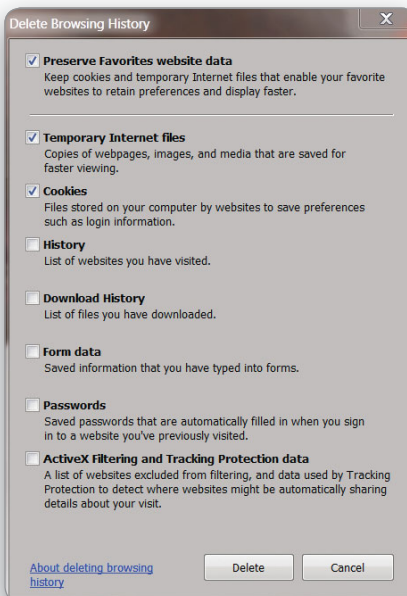
Maintenance Basics

Delete Internet Files

T he data that accumulates in our Web browser's history, such as cookies and temp files, is one of the biggest contributors to the "junk" files that slow down our computers. Fortunately, there are easy ways to clean out the browsing history in today's Web browsers, and we'll show you how.

Internet Explorer

In Internet Explorer 9, select the Tools button (it looks like a gear and is located next to the Home and Favorites buttons) and click Internet Options. Click the Delete button under Browsing History and you'll see a list of items that IE9 automatically saves, such as Temporary Internet Files, History, and Passwords. If you're looking to save space, ensure that check marks are placed in the Temporary

Internet Files, Cookies, and History checkboxes. Categories such as Form Data and Passwords save information that you've entered into previously visited websites, so they are designed to speed up your Web experience and may best be left unchecked.

Similarly, IE9 also features a Preserve Favorites option that allows IE9 to retain the cookies and temporary files for those websites in your Favorites list to help those Web pages load faster. Consider checking this box to speed up your overall Web experience. Once you've made your checkbox selections, click the Delete button and IE9 will remove the files and information. Note that the Temporary Internet Files folder may contain a large amount of data, so it could take a few minutes to finish the task.

Firefox

To clear out Firefox 9, select the Tools menu (you may need to press the ALT button to temporarily bring up the Menu Bar) and click Clear Recent History. At the top of the resulting window, Firefox provides a Time Range To Clear drop-down

Open the Delete Browsing History window to clear out the temp files in Internet Explorer 9.
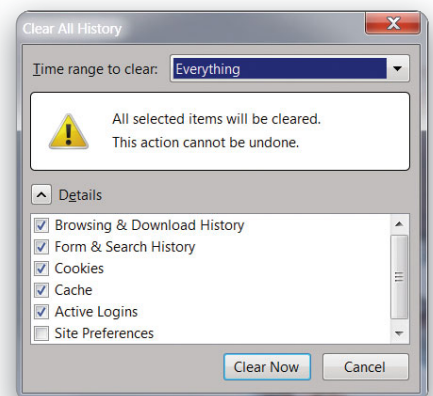
In Firefox 9, you'll want to bring up the Clear All History window.

box, where you can choose from Everything, Last Hour, Last Two Hours, Last Four Hours, and Today. Under Details, you'll find check-boxes for the various types of data that Firefox saves. The key space hog categories in Firefox are the Cookies and Cache items, so you'll want to en-sure they are checked. Items such as Active Logins and Site Preferences help Firefox to expedite the loading of your most often-visited websites, so you may want to remove the check-boxes from those options. To delete the data, click the Clear Now button.

Google Chrome

With Google Chrome 16, you clear data by clicking the Wrench icon, which is located next to the Address bar on the browser toolbar. Click Tools and select Clear Browsing Data. The pop-up window offers you an Oblit-erate The Following Items From drop-down menu where you can delete data from the past hour, day, week, month, or all Chrome files. By default, Chrome places checkboxes in the Clear Brows-ing History, Clear Download History, Empty The Cache, and Delete Cook-ies And Other Site And Plug-in Data, which are wise choices for those who want to free up storage. The Clear Saved Passwords and Clear Saved Autofill Form Data are unchecked, and you may want to keep the data, because it helps to quicken the load times of your most commonly accessed websites. Click the Clear Browsing Data button to remove the files you selected. ●
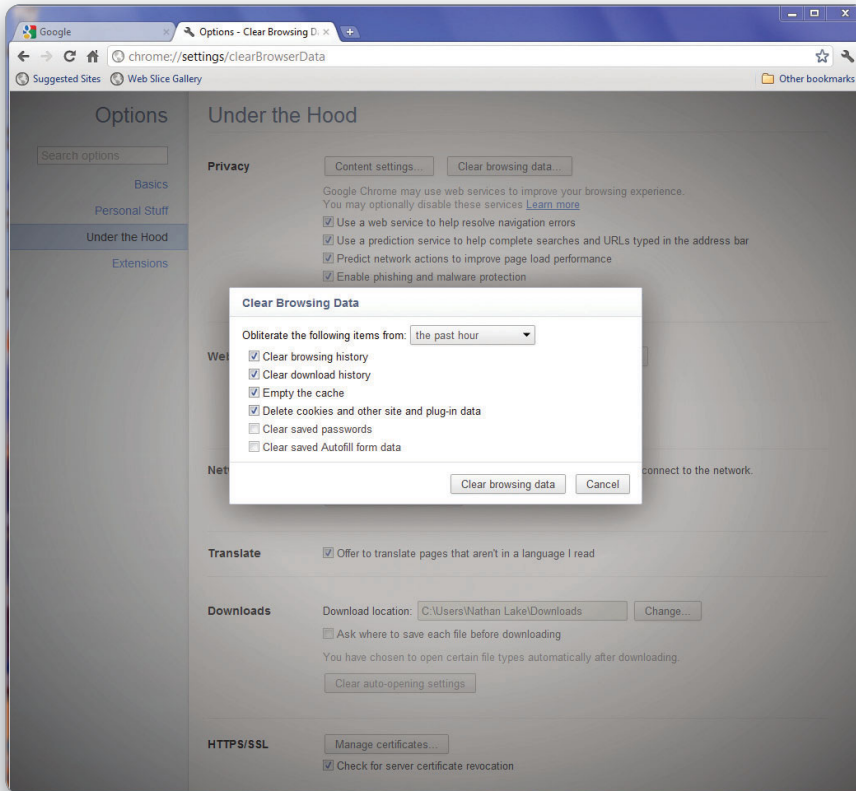
With Google Chrome, you'll want to enter the Under The Hood section and choose Clear Browsing Data.

Private Browsing

Most Web browsers also offer a mode where you can surf the Web without the browser saving any records of your activity. For example, Internet Explorer's InPrivate Browsing will block IE9 from saving any of the browsing history, tem-porary Internet files, form data, and authentica-tions when InPrivate Browsing is enabled. To do so in IE9, hold down CTRL-SHIFT-P, which starts a new private browsing session. When you close that browser window, the private session will end.

InPrivate Browsing lets you browse without Internet Explorer storing data about where you've been.
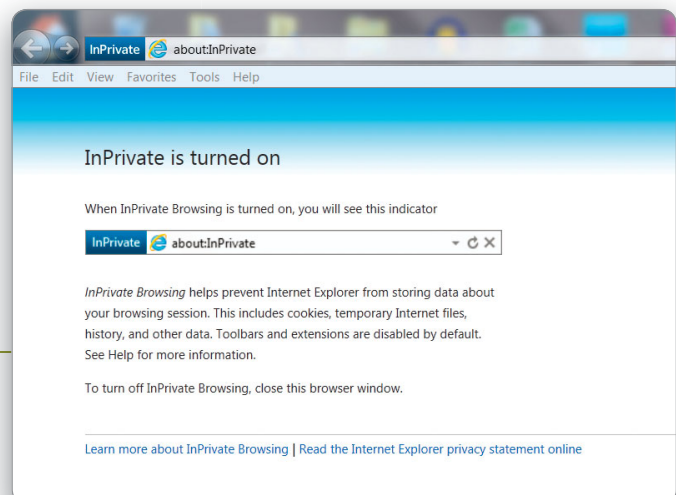
TROUBLESHOOTING GUIDE

The Red X

The red X is a common (though unwelcome) occurrence in programs, including Web browsers and email clients, when an application can't find an image or video. Here, we'll cover the steps you should take to troubleshoot a red X that appears instead of an image on a website.

1. Sometimes, Web pages simply have errors when they load, so you'll want to try and refresh the website by clicking the Refresh button on your browser. Typically, you'll find the Refresh button next to the Address bar.

**2.** It's possible that the Web browser or your security software has blocked the image from appearing on-screen. If this is the case, you should be able to right-click the image to bring up an option that will allow you to view it. For example, with more aggressive security settings, Internet Explorer often blocks images that are based on an ActiveX control, Java program, or HTTP (Hypertext Transfer Protocol) referral because this is a common way for viruses to infiltrate your PC. Internet Explorer will typically display a dialog box that explains why an image was blocked, so consider the reason before you display it.

3. It's possible that the website's server is down or having problems. Try going to a different website to see if images will load on other Web pages. If the website is down, email the website's administrator so that he knows there is a problem.

4. If your Web browser isn't displaying any images, check the settings for your Web browser. To do so in Internet Explorer 9, click the Tools menu, select Internet Options, and choose the Advanced Tab. Next, scroll down to the Multimedia category and look for Show Pictures. If there's no check mark in the checkbox, click it and select Apply and OK. Now, attempt to refresh the Web page and see if the images will display. ●
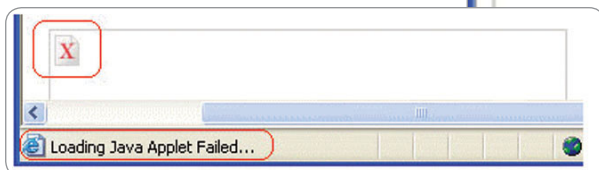
Here's an example of the red X in Internet Explorer. Occasionally, the red X will appear when images or other items fail to load on a Web page.
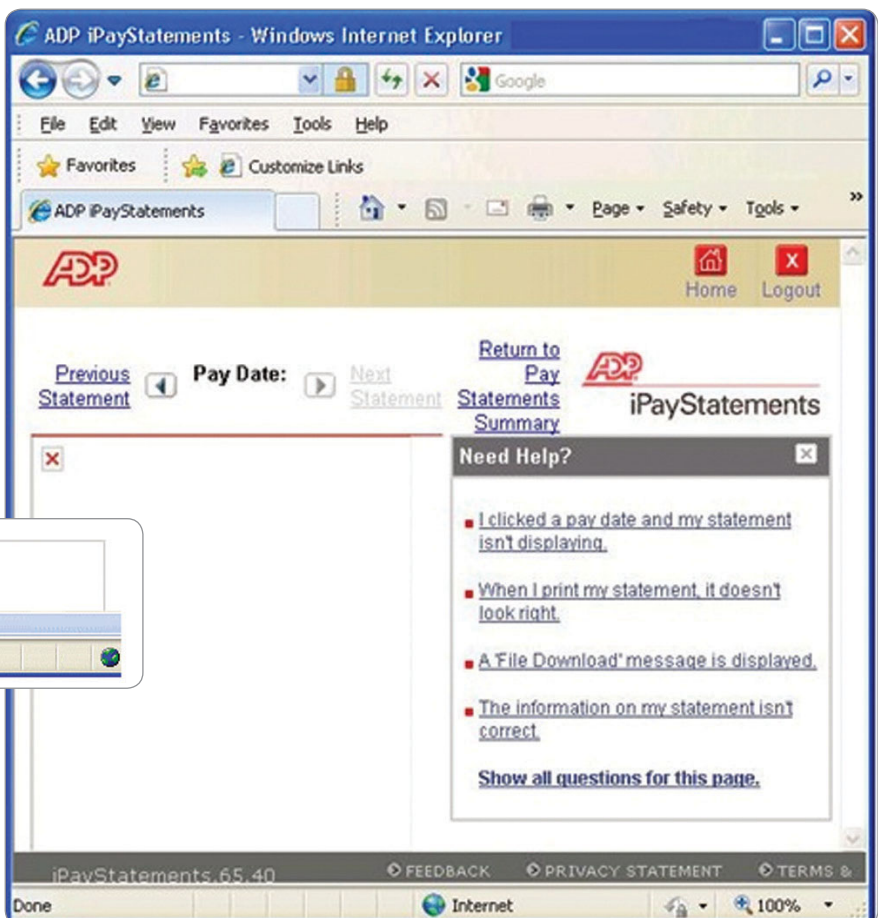
Tips From The Help Desk

Common Tech Questions

Like many other computer components, modern CPUs react to heat by slowing down or "throttling back" their activities.

Q My computer seems to be running more and more slowly. Is there anything I can do about that?

A Definitely. There are several possible causes: a malware infestation, an overheated computer, even a lack of hard drive space—along with several other possibilities. Let's take these one at a time.

These days, the possibility of malware is always something to keep in mind. You should be scanning for viruses, adware, Trojans, and other such critters at least weekly, perhaps even daily. It's generally counter-productive for a virus or other piece of malware to give away its presence; after all, as soon as you know it's there, you take steps to remove it. But most malware, in order to function, consumes system resources; when that happens, the system slows down. That's what we in the malware-detection business call a clue. If your system slows to a crawl, malware is a definite possibility. Update your virus definitions and do a thorough scan. It's OK to run more than one antivirus application, but *not at the same time*. Run a scan with one, then shut it down completely and scan with another. You may find that one will pick up malware that the other misses.

Your old machine would almost certainly make a great home or small office server, even if about the only thing it did was to store shared media and data files.

You may find that it's best to spend the extra money on manufacturer-recommended ink cartridges; the generic brands can sometimes cause problems.

Heat is bad for computers. It's rough on components, often causing them to act erratically or to fail outright. Many systems will throttle back as they overheat: They may continue to work fine, but more and more slowly. Clean out your system, making especially sure that your vents, fans, and internal cards are clear of dust. If you're running a laptop, consider using a laptop cooler.

Finally, consider your hard drive space. It may seem counter-intuitive, but a lack of hard drive space can actually slow down your system. Here's why: First, if your drive is badly fragmented (which is often the case with a full drive), the system has to waste time locating contiguous space on which to store data. Second, when you use up memory by running multiple heavy-duty programs at once, some of that memory load is shifted to your hard drive, chunks of which are used (temporarily) as "virtual memory." It's a great system, except when your hard drive is full. When that happens, the system ends up shuttling that load back and forth, unable to handle the demands in memory while at the same time lacking space on the hard drive to treat as virtual memory. Result? A slowdown.

Q OK, so I replaced my printer's ink cartridges, and now the printer doesn't work at all!

A Printers are very picky about their ink cartridges and also about how those cartridges are installed. Install them exactly as instructed; don't skip steps, don't take shortcuts. If the manual says to press the cartridge until you hear a "click," that's exactly what it means.

Note that a couple of things can interfere with correct installation. Most cartridges ship with some sort of tab, tape, or sleeve protecting the cartridge. Don't forget to remove those. (They're usually blue or orange, but could be any color.) You may have moved a lever or tab to allow removal of the old cartridge; be sure to move those levers back to their original positions.

Are you trying to save a couple (ok, many) bucks by using generic ink cartridges? If all else fails, try installing the manufacturer's cartridges, instead.

Your old machine would almost certainly make a great home or small office server, even if about the only thing it did was to store shared media and data files.

Generally speaking, it's not enough to reformat the hard drive. Instead, use a security tool to "shred" the drive.

Q I've got an older machine sitting around. I'd like to get some use out of it, but I'm not sure it's new, powerful, and fast enough to be useful.

A Your old machine would almost certainly make a great home or small office server, even if about the only thing it did was to store shared media and data files. Use the drive on the machine (or attach an external drive) as a place to store music, video, and documents that will be accessed by multiple people. (You can even stream music and video from that machine.) Just share the machine and its drive(s) with your network so that everyone can get to files stored on the old computer. One caveat: You'll want to back up those data files regularly. But keep in mind that not all backup utilities can back up from an external drive. Be sure to find a utility that will backup from any external drive you attach to your new "server."

Q Help! Some of my Windows file associations have been changed!

A This could indicate a virus (especially if it affected .EXE files), but it might be a simple glitch, or it could have been caused by some sloppy programming on the part of a utility you may have recently installed. If you suspect a virus, then be sure to run an updated scan.

If you need to re-associate files with a specific application, it's easy enough to do so. In Windows XP and Windows 7, simply right-click a file or file icon and select Open With. Select Choose Default Program. Be sure to check the Always Use The Selected Program To Open This Kind Of File checkbox.

Q Why, when I shut down my computer, do I always get a message asking whether I want to "force" the system to close an application? I've already closed all of my applications.

A You have closed all of the running applications that you *know* about. But in addition to your typical applications, there are behind-the-scene Windows processes running, background apps such as malware scanners, and sometimes even programs spawned by some other program. All the message means is that one or more of those is closing too slowly; Windows is ready to shut down, but those background operations have not caught up with it. Normally, if you wait a minute, they will close, and your Windows shutdown will proceed normally. If you'd rather not wait, there's usually no harm in forcing a close of such processes. (But be careful not to force a close of an app in which you've been working and which might contain unsaved data.)

Q I want to donate my old computer to a school. What's the best (i.e., safest) way to do that?

A First, thank you for thinking of our young people; you can bet that they'll benefit greatly from your thoughtful gift.

As for safety, that's an interesting subject—and most people who donate a computer (or pass one down to a friend or family member) don't really do a thorough job of removing all of the old data. Generally speaking, it's not enough to reformat the hard drive. Instead, use a security tool to "shred" the drive. (Keep in mind that Windows cannot format a drive on which Windows itself is running, so you'll need to boot the machine from a Recovery disc or other drive; one possibility is to temporarily install the drive as a second drive in another machine.) ●
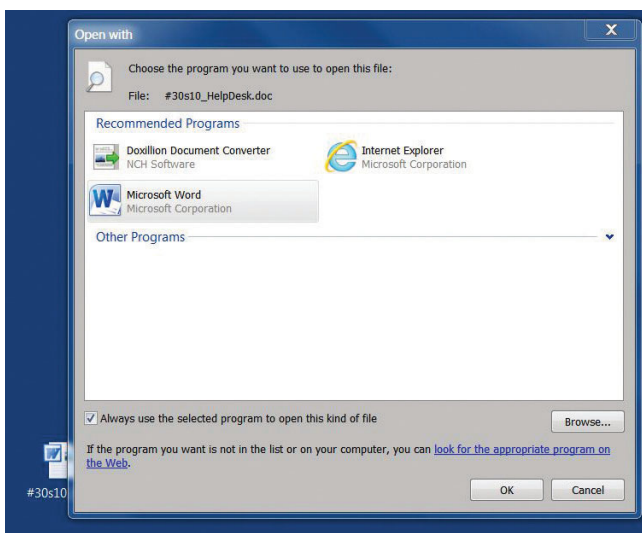
It's simple enough to associate data files with a specific application, either as a one-time action or permanently.

You Lose Wi-Fi Connectivity

Your Wi-Fi connection has proven a boon for both work and play: You can locate your computer pretty much anywhere in your home or office and still have a solid connection to the Internet, which means that you can surf the Web, send and receive email, connect to the office server via a VPN (sometimes even from your back deck or porch—how cool is that?), and much more. But what do you do when your connection suddenly . . . well, *disconnects*?

When In Doubt, Reboot

If your connection is suddenly dropped, it may be time to reboot your router and modem. (You reboot your PC often, but when was the last time you rebooted your modem and router?) Shut all three down, wait a minute or two, and then restart them in this order: modem first, then router, then computer. If that resolves the problem, then you're good to go—unless it reoccurs, in which case, read on.

Who's In Charge Here?

When you purchase a Wi-Fi card, it often comes with software you can use to configure and manage your wireless connection. But Windows has its own built-in software that does essentially the same thing. Use either one—but not both. The exact technique will vary, but select one or the other by right-clicking your wireless network icon, selecting the Wireless Networks tab, and then checking (or unchecking) the Enable Windows Management (or similarly-named) checkbox.

Interference

If your Wi-Fi worked fine until today, ask yourself what might have changed recently. Any construction in your home or office? A remodel may have literally thrown up a wall (or other such obstruction) between your system and your Wi-Fi router. Have any new devices been installed nearby? Telephones, baby monitors, microwaves, etc. in use? Those can all interfere with your wireless signal.

Up-To-Date?

Finally, consider updating the your router's firmware. Such updates often resolve bugs, add features, and generally improve the behavior of your device. Check the manufacturer's website to gain access to the latest drivers, utilities, and firmware for your router. ●

SMART COMPUTING **DICTIONARY**

Silicon Valley has long been notorious for churning out jargon along with its electronics, and it isn't showing any signs of slowing. With the rise of each new trend, more tech terms find their way into our day-to-day vocabulary. We focused on Desktop PCs in this month's feature package, and here you'll find some common jargon that you may see when shopping for one.
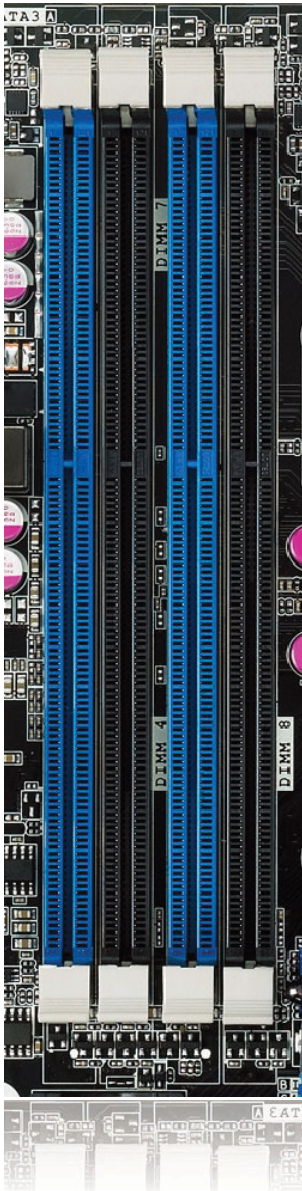
Memory slots typically feature alternating colors to help differentiate the slots.

Expansion slots • This specification covers the number of slots that the desktop PC allows for installing new add-on cards, such as a graphics, sound, or wireless cards. The expansion slot will match up with a type of slot on the motherboard, such as a PCI (Peripheral Controller Interface) or PCI-E (PCI-Express) slot.

Core • Modern processors feature multiple cores, each core capable of independently handling instructions from operating system. In general, the more cores a processor offers, the better it will be able to multitask and perform complex tasks. Currently, you'll find a variety of multi-core variants, including dual core (two), quad core (four), six-core, and eight-core. All of the cores fit into the single processor unit.

Cache • Cache is a processor specification, and it refers to the amount of memory on the processor for storage of recently computed values. Because the data is stored on the processor, the processor will be able to execute the task much more quickly than it could if it had to recompute the data or fetch it from another location.

DDR3 • This abbreviation stands for "Double Data Rate Type Three," and it's the type of memory found in modern desktop PCs. DDR3 is not compatible with previous-generation DDR2 modules, partly because DDR3 memory runs at a lower voltage than DDR2 modules.

HDD RPM • Hard drive platters must spin when they access data, and HDD RPM is short for hard disk drive rotations per minute. The specification indicates how many times the platter can complete a 360-degree rotation each minute.

Common HDD RPM levels are 10,000, 7,200, and 5,400. A higher RPM level generally allows faster access to data.

Memory Slot • Many desktop computers offer four memory slots in which you can install RAM modules. However, some smaller desktops use motherboards that only provide two slots, while high-end desktop PCs may offer six or eight such slots. A larger number of slots is handy for future upgrades, because it's less likely you'll need to remove/replace existing memory in order to increase capacity.

SSD • Solid State Drive, a type of storage device that are much faster than traditional hard drives. Rather than relying on finding data on a moving platter, an SSD's data is stored on an electronic interface, such as a type of flash memory or random-access memory. The lack of mechanical parts allows for faster access time, reduces the chance of physical shock, and is quieter than a traditional hard drive.

TB • The abbreviation for terabyte, TB is a measure of storage capacity. One TB is equal to 1 trillion bytes (or 1000 gigabytes) of data.
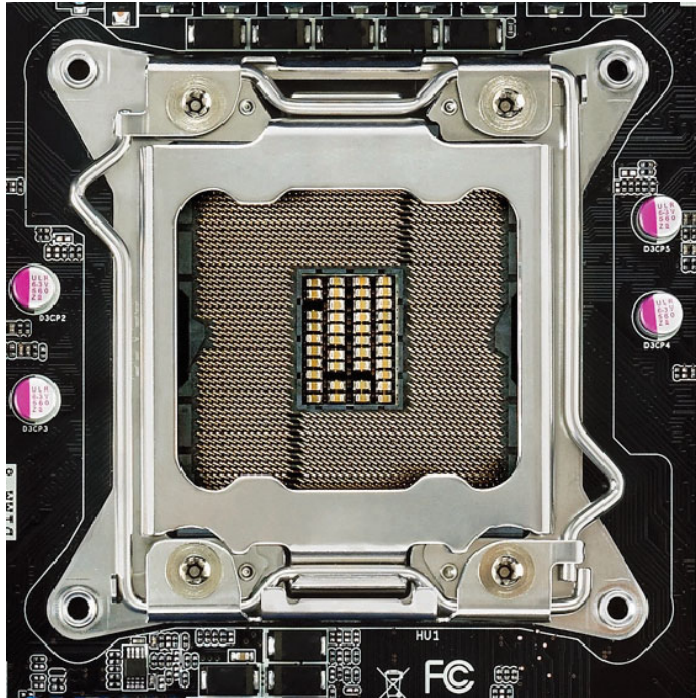
Here's what a CPU socket looks like on a motherboard.

Socket Type • Processors fit into a certain location on the motherboard, called the CPU socket. Processor manufacturers occasionally change the socket type to allow for changes in technology, so the socket may be different from processor to processor and from motherboard to motherboard. If you're looking to replace the processor in a desktop, make sure the new processor matches the CPU socket type on your motherboard.

Typically, you'll find multiple video ports on your PC.

Video ports • These are the ports found on the rear panel of the desktop PC that allow you to connect the computer to a monitor or HDTV. Common options include DVI (Digital Visual Interface), HDMI (High Definition Multimedia Interface), DisplayPort, and VGA (Video Graphics Array). Adapters are typically available that will allow you to convert from one type of port to another.
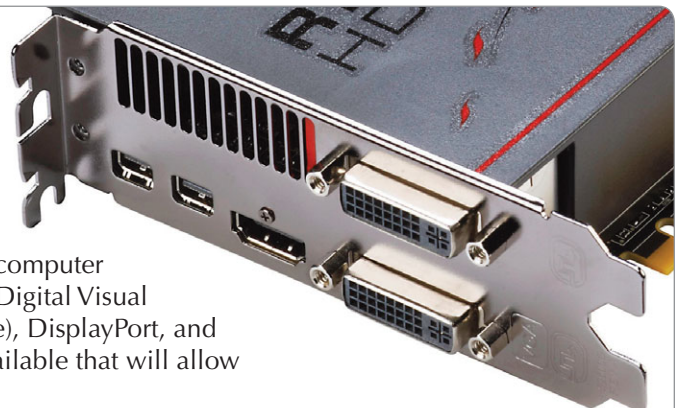
Troubleshooting Reference:
COMPUTERS

FEW THINGS ARE MORE FRUSTRATING than a computer that simply won't boot. When one of your primary means of communication, work, and entertainment is not functioning, it's not uncommon to feel isolated, unproductive, and bored. Here are a handful of tips to help get your PC booted and working again.

Start In Safe Mode

Assuming there's not a power issue (the PC is plugged in, turned on, and fans are spinning) then your boot up problem may be due to a faulty driver or other software conflict, which booting in Safe Mode can resolve. To do this, remove any device plugged into a USB port, save your mouse and keyboard, empty your optical drive and then restart your computer. Press and hold the F8 key as the computer attempts to boot (prior to the Windows Logo showing up). On the Advanced Boot Options screen, select Safe Mode and press ENTER. If your computer boots up, then you know something driver-related is the problem, so take this opportunity to uninstall anything that might have become a problem, and then attempt to restart.

Restore Your System

To access System Restore on a PC that won't boot, you'll need a Windows 7 installation disc. With your PC powered on, open the optical drive and put the disc in, and then close the drive tray. Restart your computer and then press any key when prompted to boot from the disc. You may need to change the boot options in the BIOS (Basic Input Output System) so that the PC boots from the optical drive first (press DELETE or F1 to access the BIOS during boot). When you see the Windows 7 Install Now option, click the Repair Your Computer option instead, from the bottom of the screen. Then just select the Windows installation you want to fix and follow the onscreen prompts to try the various system recovery options. ●

Prevention

The best way to avoid problems is to perform some regular maintenance on your system. Occasionally unplug your PC and take it outside to blow the dust off the vents, fans, power supply, graphics card, and CPU heatsink with a can of compressed air. This will keep you PC well-ventilated and reduce overall system temperatures. It'll also dramatically diminish the chances that your PC components will fail due to excessive heat.

Fix-It Checklist

It's helpful to have a few things on hand when your PC won't start. Here's a short checklist that'll help you solve the problem.

✓ The Windows installation disc you used to set up your computer

✓ Spare mouse and keyboard

✓ Another PC with an active Internet connection

✓ Driver discs that came with your components or PC

✓ Phillips-head screw driver

✓ Can of compressed air

✓ USB flash drive

Troubleshooting Reference:

TABLETS & SMARTPHONES

TABLETS AND SMARTPHONES ARE powerful little machines, but when they malfunctioning, all that productivity and entertainment comes to a halt. But don't fret; in most cases you can recover your devices with little effort. Simply follow these basic troubleshooting tips to get your shiny slab of glass back in working order.

The Tablet Is Frozen

Your tablet or smartphone might freeze or hang for a variety of reasons, from a faulty app to a dearth of available memory. Before you can determine what caused the problem, however, you need to regain control of it. If you're using an iOS-based device, then the first thing you should do is press

and hold the Sleep/Wake button until you see the Slide To Power Off slider, then swipe it to shut it down. If that fails, press the Sleep/Wake button and the Home button simultaneously until you see the screen go dark and display an Apple logo.

For most Android-based smartphones and tablets, a normal shut down procedure involves pressing and holding the power button and then tapping the shutdown option that pops up onscreen. If you don't see a shutdown option, you can force the operation by continuing to press and hold the power button until the unit shuts down or restarts.

Some Android tablets, including the Motorola Xoom, require a slightly dif-

ferent procedure. To perform a soft reset on a Xoom, press the power button and the Volume Up key simultaneously until the unit shuts off. Consult your manual for the proper procedures.

One Or More Apps Have Disappeared

Apps are the smartphone and tablet's best assets, but if you're ever unable to find one of your favorites, it might be because your device recently installed an operating system update that is incompatible with the app version you had previously installed. But don't worry, simply return to the App Store (iOS) or Google Play (or other Android app source) and reinstall the missing app. ●

Prevention

The best way to avoid problems with your mobile device is to perform some regular maintenance on it. Start by always keeping your tablet and smartphone charged, which ensures it has enough juice to install updates when necessary. Keep at least 30MB or more of the internal memory free at all times. If you get a low memory warning, that's a good indication that you need to start deleting some apps or backing up photos and videos to your PC.

Fix-It Checklist

It's helpful to have a few things on hand when your tablet won't start. Here's a short checklist that'll help you solve the problem.

- ✓ USB charging cable
- ✓ Power adapter
- ✓ Active Wi-Fi connection
- ✓ Tablet or smartphone owner's manual

- ✓ Dry non-abrasive screen-cleaning cloth
- ✓ Spare SD card or microSD card for compatible devices

Troubleshooting Reference: MONITORS

IT DOESN'T MATTER HOW MUCH WORK you need to do or how capable your PC is, if your monitor is faltering or malfunctioning, then nothing gets done until the window into your PC gets fixed. Most monitor problems don't require professional service; you can address them yourself. Follow these basic troubleshooting tips to see clearly again.

The Monitor Screen Is Dark

First, check to make sure you've pressed the power button on the monitor, that the monitor is plugged into a working outlet, and that there is no on/off switch on the back of the monitor that has been switched to the Off position. If you see a lit LED (commonly amber or yellow), but the screen is still dark, then it's possible that the monitor is not receiving a signal from the PC. Try pressing the Input or Source button (if present) multiple times to cycle through the various source types. Make sure the display cable is attached to the back of the monitor and the associated port on the PC tower. Tighten any loose connections. To ensure that the monitor is the problem and not the PC (or the graphics adapter in the PC), try plugging in a monitor that you know is working properly, making sure to use that monitor's cable. If it works, then try swapping cables. If none of the above work, you may need to replace your monitor or get it repaired.

Problems With Color, Brightness, Contrast, & More

If the contrast, brightness, sharpness or another setting on your monitor is affecting the display, then you should consult your monitor's user manual to determine how to access the OSD (On-Screen Display) menu. The manual should include instructions for adjusting color settings, contrast, brightness, and other settings. If fiddling with the OSD doesn't help, and you're seeing color distortion, check the ports on the monitor cable for bent pins. If you don't see any or can't repair them yourself, try a different monitor data cable. If the problem persists you may need to repair or replace the monitor. ●

Prevention

The best way to avoid problems is to perform some regular maintenance on your monitor. Because there are no moving parts on your monitor, dust and heat are going to be the focus of your preemptive attention. Use a can of compressed air to clear vents (while the monitor is off) and make sure the monitor is not exposed to direct sunlight or excessive temperatures.

Fix-It Checklist

It's helpful to have a few things on hand when your monitor is malfunctioning. Here's a short checklist that'll help you solve the problem.

- ✓ Power strip or surge protector plugged into a working outlet
- ✓ Can of compressed air to dust off vents
- ✓ Monitor user manual
- ✓ Spare monitor data and power cables
- ✓ Spare monitor

Troubleshooting Reference:
PRINTERS

FOR MANY SMALL BUSINESSES, THE printer is a vital cog in the machine; when it goes down, productivity suffers and some important work effectively stops. But before you call in a professional, try to fix the problem yourself. You can do it by following these simple troubleshooting tips.

When In Doubt, Check The LCD

Most printers feature some sort of LCD display that reports that status of ink cartridges, toner, and most importantly, any error messages you should be aware of. It's a good idea to periodically glance at the display, but make it your first stop if you run into problems. Often you'll find errors and messages displayed here that give you specific instruction for how to solve the issue. Some common LCD messages include "drum error" (remove and replace the drum), "jam" (paper jam), and the self-explanatory "low ink" or "low toner."

Printer Fails To Print

If the printer stops printing, start by making sure the unit has power and is turned on. Allow enough time to pass to account for the warm up period (if your printer requires one). If the printer is new, make sure any packing material, tape, and protective plastic has been removed from the unit. Check that the drum, toner cartridge, or ink cartridges are in their proper places and the compartments that provide access to the inner part of the printer are closed. Make sure there's plenty of printer paper in the tray(s).

If the printer is connected via USB or Ethernet, make sure the cable spanning the two devices is securely connected. If the printer is connected wirelessly, make sure it can detect the wireless network and that the printer and PCs on the network can communicate.

If your printer supports it, it might help to try an alternate connection method. For instance, connect a Wi-Fi-connected printer to your PC using a USB cable instead, and then retry the print operation. ●

Prevention

The best way to avoid problems is to perform some regular maintenance on your printer. Every time you replace the toner or ink, take a moment to inspect the unit, remove the paper trays, and wipe it down with a clean, dry cloth. Don't regularly exceed the recommended duty cycle for your printer. Replace the ink and toner cartridges exactly as described in the printer's manual and only use the ink, toner, and paper recommended for your device.

Fix-It Checklist

It's helpful to have a few things on hand when your printer goes on the fritz. Here's a short checklist that'll help you solve the problem.

✓ Printer's user manual

✓ USB cable

✓ Working Wi-Fi connection

✓ PC with an active Internet connection

✓ Driver disc that came with your printer

✓ Replacement ink or toner cartridge(s)

✓ Paper for printing test pages

Troubleshooting Reference:
INTERNET CONNECTION

THE INTERNET IS THE LIFEBLOOD OF THE modern computing experience. Without it, your software remains static, unpatched, and vulnerable; you can't communicate or transfer files; nor can you contact remote customers, clients, and coworkers. But before you give up and move to the shores of Walden Pond, try these troubleshooting tips to get back online.

Can't Load A Web Page

There can be many causes for a faulty Internet connection. Start by launching your browser, typing www.microsoft.com into the address bar, and pressing ENTER. You can also navigate to other known sites: If those sites load properly, then the site that failed to display may be temporarily offline, so just try back later.

Next launch the Network Diagnostics tool. The easiest way to do this is to launch Internet Explorer and click the Diagnose Connection Problems button when it fails to bring up your home page.

If the problem persists, reset your modem and router. Start by removing the power plugs from the back sides both devices. Next, plug in the modem and wait for the lights to come on (typically ten to twenty seconds), then plug in the router. Some modems have battery backups, so you may need to reset yours by pressing a recessed button on the unit. Make sure all Ethernet cables between your PC, modem, and router are secure, and then relaunch your browser to see if the problem is fixed.

If not, delete your browsing history. In Internet Explorer, click Tools (press ALT if you don't see the Menu bar), click Delete Browsing History, and then click the Delete buttons for Temporary Internet Files, History, and Form Data.

You can determine if the malfunction is due to a faulty add-on by running Internet Explorer without add-ons. Click Start, All Programs, Accessories, System Tools, and then click Internet Explorer (No Add-ons). Not running IE? Other browsers should offer similar functionality. ●

Prevention

The best way to avoid problems with your Internet connection is to keep up with updates to your operating system and internet browsers. Click Start, Control Panel, System And Security, Windows Update, and then click Check For Updates from the left pane.

Fix-It Checklist

It's helpful to have a few things on hand when your Internet connection stops working. Here's a short checklist that'll help you solve the problem.

- ✓ A spare computer on your network
- ✓ Manuals for your router and modem
- ✓ Spare Ethernet cables
- ✓ Phone number for your Internet service provider
- ✓ Phone

New & Noteworthy

{ *An eclectic assortment of tech and office items both useful and interesting, fun and practical. All of these are available at your local Staples store or on the Staples website (www.staples.com). Face it, you need some of these things!* }

PNY Bracelet Attaché 8 GB USB 2.0 Flash Drive

Gumdrop Drop Tech Series iPad 2 Case

Franklin DRP-3000 Any-Book Reader, 15-hour

LightWedge Verso Wrap Light For Kindle

PNY Bracelet Attaché 8 GB USB 2.0 Flash Drive

Take your files with you anywhere, and do it in style. PNY's Bracelet Attaché (www3.pny.com) is an 8GB USB 2.0 flash drive and bracelet in one. The drive is compatible with most computers and comes with a one-year warranty. The soft rubber bracelet is available in a variety of interchangeable and reversible designs.

Franklin DRP-3000 AnyBook Reader, 15-hour

Bring your child's favorite book to life even when you can't be there to read it in person. With the Franklin Electronic Publisher DRP-3000 AnyBook Reader (www.franklin.com), you can record your voice as you would read the tale in person, complete with silly voices and sound effects, if you like. Then your child can play back the story while following along in the book. The AnyBook Reader can store up to 15 hours of recordings and doesn't require the purchase of special books; it works with any of the books in your home library.

Gumdrop Drop Tech Series iPad 2 Case

iPad cases come in so many colors and are made of such a wide variety of materials these days that it can be difficult to choose the right one. If you are in the market for a durable case, check out Gumdrop's Drop Tech Series iPad 2 Case. The rugged case has reinforced rubber corner bumpers and is constructed of material that gives your iPad multiple layers of protection. The case also features a screen cover that snaps into place, along with port covers, so all aspects of your tablet are protected.

LightWedge Verso Wrap Light For Kindle

Don't be left in the dark when reading your Kindle. The LightWedge Verso Wrap Light For Kindle (www.lightwedge.com) has a powerful LED that shines evenly and sports a flexible neck that you can bend to direct the light where you need it most. The included interchangeable cuffs make for a secure fit on most eReaders. The rechargeable (via the included USB cable) battery provides 15 hours of light on a single charge.

When a computer breaks down, everyone looks to you for the solution.

That's why you look to *Smart Computing*. Each issue is packed with troubleshooting information that will help you spot the source of the problem and get your system humming again. Our plain-English tutorials and large, clear pictures give you the confidence and the knowledge you need when repairing an ailing PC. And once your computer is running again, *Smart Computing*'s software and hardware maintenance tips will help you keep it that way. Plus, you'll find info on all the new products you'll need for your home and office.

Can't Get Enough Smart**Computing**?

like us, follow us, circle us.